NAVY DEPARTMENT BUREAU OF MEDICINE AND SURGERY

ANNUAL REPORT

OF THE

Surgeon General, U.S. Navy

CHIEF OF THE BUREAU OF MEDICINE AND SURGERY

TO THE

SECRETARY OF THE NAVY

FOR THE FISCAL YEAR

1918



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1918

TABLE OF CONTENTS.

	Page.
Introduction	5
Medical Corps	6
Dental Corps	10
Nurse Corps, Female	11
Hospital Corps	12
Medical representatives in war zones	23
Special details	24
Special investigations	26
Psychiatric research	28
Psychiatric research Rehabilitation and vocational reeducation.	32
American Red Cross	33
American Red Cross	34
Emergency hospital construction.	34
Naval Medical School	36
Medical and surgical supplies.	37
Publications	40
Division of sanitation	42
Sanitary measures and conditions afloat	53
Report of fleet surgeon, Atlantic Fleet	54
Reports from cruising ships.	57
Cruiser and Transport Force.	63
Hospital and ambulance ships.	68
Report of fleet surgeon, Pacific Fleet	15
Report of fleet surgeon, Asiatic Fleet	75
Naval hospitals	79
Stations beyond the seas. Navy yards, training stations and receiving ships.	103
Navy yards training stations and receiving ships.	110
Diseases of special interest	100
Recruiting	179
Necrology	180
Necrology Honors and distinctions	180
Statistical tables.	191
Index	259

REPORT

OF THE

SURGEON GENERAL, UNITED STATES NAVY.1

DEPARTMENT OF THE NAVY, BUREAU OF MEDICINE AND SURGERY, Washington, D. C., October 1, 1918.

To: Secretary of the Navy. Subject: Annual report for fiscal year 1918.

In submitting the following report of the activities of the bureau I wish to state at the outset that the policy during the past year has been to concentrate every effort on the immediate physical needs of our personnel. There are at this time many collateral lines of medical work, such as historical investigation and records connected with the war, general scientific research, general medical education, theoretical studies of problems bearing on naval life in general, which are interesting in themselves and would be of ultimate value to the service, but neither the time available nor the available personnel have warranted the pursuit of these things. The conditions of war give full scope for the utmost endeavor while confining ourselves strictly to keeping the well from getting sick and to helping the sick to get well. Though eager to cooperate with every good agency concerned with public utilities or conducting public business of any sort, I have felt that the health of the Navy was my first concern and that to go outside of my immediate province, through the natural impulse to help those outside of it, might easily involve neglect of the special duty with which I am charged and for which alone I can be held responsible. It has been my earnest endeavor to meet every legitimate requirement within the Navy, and at the same time to observe the closest economy in the expenditure of the Nation's funds. This determination to make no demands, except those based on past experience, common sense and the anticipation of imminent contingencies, has frequently occasioned not a little anxiety, lest through unforeseen events the provisions made should prove inadequate.

A rapid expansion in personnel and matériel marked the beginning of and has steadily progressed throughout the fiscal year. Steps were being taken to meet the needs of the increased personnel when my last report was submitted, and the necessary measures for housing and treating the sick and for controlling the health of all have been taken, in so far as circumstances within the control of this bureau permitted, and I believe that they were adequate. A broad survey of the situation enables me to report to you that, while there

must inevitably have been some errors and shortcomings dependent on human fallibility, the sick have been duly cared for and the well have been hedged about with every protection which it was within

our power to furnish.

To care for the sick and to protect the well is at all times a problem of difficulty. In time of war the task is overwhelmingly greater because, when large numbers of men are brought together, epidemic diseases are enormously increased. Concentration works the greatest havoc when it is rapidly carried on, because advance preparations can never keep pace with the enrollments. Next to the fact that the health of the Navy has been excellent and the mortality rate very low, I find a cause for satisfaction in the evidence that commanding officers are coming more and more to appreciate the importance of those laws of hygiene and sanitation which can not be broken except at terrible cost. The firm purpose of the bureau and the honest intent of all medical officers of judgment and experience have been to contribute to the efficiency of the Navy and to further its interests as a whole. If, in recommendations looking to the ultimate accomplishment of those just aims which are common to all, we have sometimes seemed to hamper momentarily the execution of military plans, we have been ready to compromise and have endeavored to avoid dogmatism in the expression of opinion, inculcating upon all branches of the medical department the necessity for cooperation and for coordination of effort and the duty of subordinating individual views and the theoretical demands of the situation to the best practical method that will meet with general acceptance. Whenever overcrowding has occurred it has been through zeal for the attainment of the ultimate success of our arms, and in many instances it has been the inevitable result of military necessity. On our ships new men had to be trained, and trained with all possible dispatch. It was necessary to have on board older officers and men in sufficient numbers to conduct the training, as well as to handle the ship with more than ordinary skill and precaution. But, in times of peace even, the conditions inherent to life affoat necessarily approach very closely the margin of safety for health. It should be generally recognized, therefore, that to a considerable extent any defects of system and management that may have developed in the present exigency are ascribable to the country's unpreparedness for operations of such unexpected magnitude as those we have been compelled to undertake in this colossal war.

With these preliminary observations, and after testifying to the willing service and the high character of the service rendered by medical officers, dental officers, female nurses, hospital corpsmen, and the civilians working with us, I proceed to a detailed consideration of the features of special interest embraced in the year's work.

PERSONNEL.

Medical Corps.—The commissioned medical personnel available in the Medical Department of the Navy at the issuance of my last annual report totaled approximately 1,800. Since that date some 1,200 additional medical officers have been enrolled, giving a total of 3,000. This increase has more than kept pace with the growth of the Navy, and has allowed for the constant maintenance of a mod-

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erate inactive reserve which can be depended upon to meet unusual service demands. Offers of service have been sufficiently numerous to allow the maintainance of high physical and professional standards. The increase in our personnel has been a great source of gratification as regards professional ability, initiative and officerlike qualities. All candidates have been rigidly examined by permanent and experienced boards located at our naval hospitals, and those qualifying have been required to demonstrate thorough satisfactory physical, professional, and moral fitness before acceptance for naval duty. In the many and varied activities which they have been compelled to handle, I am glad to say that the Medical Department has every right to be proud of the achievements of the medical officers in the Naval Reserve Force.

As during 1917, so at the time of graduation of the 1918 Class "A" medical schools the opportunity of enrollment was extended to graduates of exceptional standing without professional examination. Some three hundred of these young men, vouched for by the deans of their respective institutions as being the best in their classes, were thus enrolled. The great majority of them are now on duty in our naval hospitals, or are finishing civilian internships prior to orders to active service. With the courteous cooperation of the Surgeon General of the Army those students in the Medical Enlisted Reserve Corps of that service were promptly released when expressing a preference for naval service and after qualifying before the physical

examining boards.

Among the older physicians enrolling the various specialties have been sufficiently represented to supply all needs. The bureau has carefully indexed all such specialties, and it is believed that a minimum of waste of special abilities has occurred. The greatest assistance in this direction has been rendered by our carefully organized Naval Base and Station Hospital Units. Seven of the former, large, and 25 of the latter, smaller, units have been organized. Five of the former are on duty overseas, and 12 of the latter on these shores or at sea. In every case the professional nucleus provided by the permanent specialists of these units has been supplemented by as many additional juniors from the Regular or Reserve establishment as were needed to handle the increase in beds. Despite the adverse conditions encountered overseas in connection with the establishment of base hospitals, such as crowded communities, lack of housing, scarcity of labor, etc., only the highest encomiums have been bestowed for their handling of Army and Navy patients. New hospital construction in this country (discussed elsewhere in this report) has generally been accompanied by the assignment of a professional nucleus of a station hospital unit (i. e., surgeon, internist, roentgenologist, and specialists in laboratory and eye, ear, nose, and throat work). This procedure has also been adopted toward our three hospital ships now in commission.

The greatest drain upon the administrative abilities of our older nedical officers of the regular service has been encountered in the organization of the transport service. Under present conditions this service and its convoy represent the front line trenches of the Navy. The many problems in connection with the transportation of from 1,500 to 8,000 soldiers aboard one ship have necessitated the detail of a medical officer of considerable naval experience as senior

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medical officer. It has been the source of the greatest pleasure to me to note the unvarying enthusiasm and intelligent and devoted application of these officers to the responsibilities placed upon them. I doubt whether in any way the Medical Department of the Navy will receive more permanent credit than that accruing through this demonstration of naval efficiency to the millions transported overseas, and to the maimed and sick returned after contributing their share to the preservation of their country's and the world's safety. The many junior medical officers on this service have proved the worth of our new and rapidly enrolled personnel and can not be commended too highly. They are necessarily those who will shoulder the responsibilities of seniors in the new accessions to the transport force and we have at present a sufficient supply with experience of the past year to handle all new vessels.

Overseas activities have called for some 400 medical officers for duty with base hospitals, the marine brigade, aviation stations, naval bases and cruising vessels, other than those of the transport force. All demands from Vice Admiral W. S. Sims, United States Navy,

have been largely anticipated or promptly acceded to.

The battleship fleet has imposed unusual problems upon our medical officers owing to the crowded condition of the complements. This has been ably met, however, and has proved a valuable school of instruction for juniors. The battleships have also been used as a reservoir for the detail of younger medical officers to newly commissioned vessels of small complements. By a careful scanning of the individual and by systematic avenues of instruction and training, the varied needs for new assignments have been happily met.

Legislation for permanent increase of the Navy in the act of July 1, 1918, carried automatically with it a strength of the Medical Corps. as of that date, of 1,166. The corps has at present 841 permanent and 431 temporary officers. To fill the 325 vacancies examinations are being held, open to those among the above temporary officers and among the officers of the Naval Reserve Force within the legal age limits of 21 to 32. It is not anticipated that these vacancies will all be filled at the present time, and examinations will be held at

periodic intervals to this end.

Promotions within the corps up to and including lieutenant commander are dependent upon the promotion of the officer's running mate in the line, above that depending upon the fixed percentages of the corps' total as provided by the act of August 29, 1916. These latter are selected by a board appointed from members of the corps by the Secretary of the Navy. Upon the total of 1,166 the following are allowed in the various grades: Admiral 6, captain 47 (and 2 extra numbers), commander 93, lieutenant commander, lieutenant, and lieutenant (junior grade), 1,020. The percentage of permanent to temporary officers in each grade is in the same ratio as the number of permanent to temporary in the total of the corps.

The Naval Reserve Force at the time of my annual report of 1917 numbered only 800 medical officers. In addition to these some 200 officers of the Medical Reserve Corps, National Naval Volunteers, Naval Militia and acting assistant surgeons were available. These varied units have since that date by legislation or departmental action been incorporated with the Naval Reserve Force, and the latter at present embraces approximately 1,600 officers. Including those

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viduals who ha a conspicuous course of instru feller Institute Reserve Force officers who have since been absorbed by the Regular Establishment, permanent or temporary, some 2,400 have been enrolled from civil life. The character of this increase has been spoken of in a preceding paragraph, and the Navy is to be felicitated upon the very high average of professional ability accepted and maintained.

Original assignment to duty has been, when practicable, to the Naval Medical School, Washington, D. C. Courses of instruction of two months' duration have schooled these officers in the rudiments of naval discipline and drills and medical department duties, as well as in advanced work in laboratory procedure, hygiene, eye, ear, nose, and throat work, etc. When it was impossible to assign an officer to this school, he has been placed for his first duty at one of our large naval hospitals, stations, yards, training camps, etc., where in a less concentrated form he has obtained the information regarding naval procedure which was foreign to his civil practice or his professional education, but which is so essential in fitting him for the responsi-

bilities of independent naval duty.

Original enrollments in the Naval Reserve Force have been in the grade of assistant surgeon, rank of lieutenant (junior grade). The only exception to this has occurred in the formation of base and station hospital units, where appropriate grades and ranks have been allowed. Every effort has been made by this bureau, however, to secure appropriate promotion for these officers, dependent upon priority of enrollment, professional standing, and age. In addition, the transfer of a number to a temporary status in the Regular Establishment procured for them automatic promotions thereafter. The Bureau of Navigation has been desirous of securing a uniform method of promotion in the Reserve, avoiding as far as possible a multiplicity of personal appeals backed by varied influences, and securing for all branches of the Reserve an avoidance of discrimination. All medical officers enrolled in class 4 of the Naval Reserve Force, will be transferred to class 2, which class carries with it automatic promotions with promotions of medical officers of the regular service of corresponding amount of active duty subsequent to such transfer. Commanding and senior medical officers should certify that medical officers of the Reserve Force under them are fully qualified for the performance of all their duties, ashore and afloat, and recommend that they be transferred to Class 2, as of such date as they were deemed so qualified. In no case can this be prior to the performance of three months of active duty. Owing to the difficulty of actually affording sea duty to all officers, and to the fact that Medical Department duties ashore vary little from those afloat, this recommendation can be made as to qualifications for all duties affoat based upon performance of duties ashore.

Promotions above lieutenant commander in the Reserve can be made upon recommendation of the same selection board which

selects for promotion of officers of the Regular service.

Grateful acknowledgement is hereby made to the various medical societies, colleges, or other organizations, and to the private individuals who have aided the work of the Medical Department. As a conspicuous instance of this assistance may be mentioned the course of instruction for military medical officers given at the Rockefeller Institute on the most recent developments in wound treatment.

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Dental Corps.—The expansion of the Dental Corps of the Regular service and of the Reserve has kept pace proportionately with the growth of the medical personnel. From a total of 30 dentists at the outbreak of hostilities, this number has expanded to over 500. The naval appropriation act of July 1, 1918, in authorizing a permanent increase in the Navy, automatically set a maximum limit of 179 dental officers for the Regular service. There are at present 124 officers commissioned in the Dental Corps, thus leaving 55 vacancies. Examinations are held at the Naval Medical School, Washington, D. C., and at the naval hospitals at Great Lakes, Ill., and Mare Island, Cal., for the filling of such vacancies. The age limits for applicants by the same act are changed to 21 to 32 years. The balance of the 500 dental officers are in the Naval Reserve Force, which has also absorbed the old Dental Reserve Corps under a provision of the above legislation.

Promotions in the Dental Corps are made automatically with officers of similar length of service of the Medical Corps of the Navy, up to and including the rank of lieutenant commander. Beyond this, advancement to the pay and allowances of commander and captain occurs "when their total active service as dental officers in the Navy is such that if rendered as officers of the Naval Medical Corps it would place them in the list of medical officers with the pay and allowances of commander or captain, as the case may be." Promotions in the Naval Reserve Force will be accomplished by a

transfer to Class 2 of the Naval Reserve Force, as described on page 9 with regard to medical officers.

First assignments to active duty are, when practicable, made to the Naval Training Station, Great Lakes, Ill., where a school of instruction for dental officers is in operation. Classes are convened at intervals of 8 to 10 weeks, and the student officers receive training, in so far as naval duties go, similar to that provided for medical officers at the Naval Medical School, Washington, D. C. This is supplemented by advanced work in oral surgery and other professional branches.

The special course of instruction in oral surgery conducted by the Evans Institute of the University of Pennsylvania for the Dental Corps of the Army was made available for Navy dental surgeons, a

number of whom attended and profited by the course.

A very large amount of valuable work has been accomplished by our dental officers, the effects of which are not only felt at the present time, but will be also after the return of our fighting forces to civil life upon the cessation of hostilities. It would be hard to say too much in praise of the services rendered by our dentists. A very large number of these officers are at sea or overseas. Fully 90 per cent of the members of the Regular corps commissioned during the war are on such distant duty. Additions are constantly being made to the Reserve Force list as new transports are commissioned or overseas activities are initiated or enlarged.

Elsewhere in this report the death of the late Dental Surgeon Weeden E. Osborne, United States Navy, is noted. Allow me to call attention here also to the fact that his was the first death of a commissioned officer of the Navy during the land fighting overseas. In the hottest of the fighting when the marines made their famous advance, because for the moment his more strictly limited profes-

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sional activities could not be exercised, he threw himself into the general work of rescue and was instantly killed while carrying a

wounded officer to a place of safety.

NAVY NURSE CORPS (FEMALE).—During the past fiscal year the total number of nurses assigned to duty numbered 1,128. Of this number 83 have been separated from the service by reason of honorable discharge, resignation, and disenrollment, leaving the number of the nurse corps at the beginning of the fiscal year 1918, 1,045. It is with regret that I report the death of two members of the nurse corps due to illness contracted in the line of duty.

Since December, 1917, 60 nurses have been assigned to each of four base hospitals abroad. In addition to these large units a group of 6 nurses has been assigned to a small naval hospital in France about to be commissioned, and a group of 15 nurses has been mobilized for

assignment to a naval hospital in London, England.

In the United States nurses have been assigned to 10 hospitals commissioned since my last report. In addition to these hospitals nurses have been assigned to the Naval Gun Factory Annex, Rochester, N. Y., and the Cable Censor Office, New York; to the naval dispensaries at Annapolis and Charleston, and to the Hospital Corps Training School at the Naval Training Station, Newport, R. I. These demands have necessitated the assignment of nurses specially qualified as surgical nurses, welfare workers, and instructors, and have also required examination and promotion of 20 additional chief nurses.

The work which has been well established in the Philippine Islands, in Guam, and in Samoa has not decreased and the special work of training the native women in Guam and Samoa has been increased by additional nurses being detailed for the training classes. The tributes paid to the last graduating class in Samoa particularly noted the superior work which has been accomplished by the members of the nurse corps who have carried out the course of instruction for these women. Medical officers, who have been familiar with the excellent results from the established training schools in Guam and Samoa, recommended that the training of native women in the Virgin Islands be increased and in compliance with this recommendation nine members of the Navy Nurse Corps have been sent out and training schools in three of the islands are now well established.

A recent recommendation that a nurse be sent as supervisor at the Richmond Institute for Lepers and Insane, Virgin Islands, necessitated a volunteer for this work. In spite of the demands for war service an appeal was sent to two hospitals resulting in 14 members of the Navy Nurse Corps volunteering their services for this particular week.

At the request of a medical officer serving in Port au Prince, Haiti, two qualified nurses have been sent to instruct the Roman Catholic sisters there in the methods and development of training schools for native women who desire to learn nursing. Though this work has recently been started, the results have been entirely satisfactory and the nurses in charge of the undertaking have received special commendation from the President of the Republic of Haiti.

In making this report of the duties and responsibilities of the nurse corps so ably performed and cheerfully assumed it is hoped there will be a more general recognition of the value of their services

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and that the appreciation which is bestowed upon other branches of the service will be fully and freely extended to them.

During the recent widespread epidemic of influenza the followingnamed nurses died of this disease, contracted in line of duty while nursing patients assigned to their care: Maude Coleman, Marie L. Hidell, Constance Martin, Edna E. Place, Vera M. Rockwell, Maria

THE HOSPITAL CORPS.—The expansion of the naval personnel due to Eliza Trimble. the war has been marked by a corresponding expansion of the hospital corps until, on January 1, 1918, this corps reached its then fully authorized strength, and recruiting, except to meet the needs of each naval district, had to be discontinued.

Growth of the hospital corps:

Growth of the nospital corps.	1,585
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July 1, 1916	H 4 FT10
July 1, 1917	14, 718
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July 1, 1918 was declared	d, and

The 15 months between April 4, 1917, when war was declared, and July 1, 1918, brought into the hospital corps, through recruiting channels, about 12,000 men, making the corps nine times its prewar size.

The success with which this corps has been recruited to its full strength is due to three factors: (a) The personnel bill of August 29, 1916, which gave to the hospital corps the same opportunity for advancement in rating that existed in other enlisted branches; (b) the publicity given this corps by a poster and a pamphlet of information, both of which had wide distribution; (c) the effect of the war and the selective-service law, which made each young man of the country focus his attention upon the military service and come to a decision as to which particular branch of the service best fitted his temperament and abilities. So many young men have wished to enlist in the hospital corps that for the past year it has been possible to decide almost to a man just how many were to be enlisted through the recruiting channels each month. When the last increase in the authorized enlisted strength of the Navy was voted by Congress, the increased number of hospital corpsmen authorized by that bill was already enlisted and in training, so that practically the only way to enter the hospital corps to-day is through the enrolling office in the naval district to meet the district needs.

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While the number of men in the hospital corps is now ample for all demands for the next few months, it will probably be necessary, if the war continues, to again open enlistments and continue enrolling for this corps. The time is not far distant when enlistments in the Navy and the draft for the Army will have taken all men of class 1 into active service and there will be left only young men below the draft age, older men above the draft age, and men in preferred classifications. All enlistments and enrollments in the hospital corps up to July 1, 1918, were between the ages of 18 and 28, and the men are fully up to the Navy's physical standard. above the age of 28 years were not allowed to enter this corps. its future supply the Bureau of Medicine and Surgery will probably look to the younger rather than to the older classes of men.

The problem of training this large number of hospital corpsmen, practically all of whom had enlisted or enrolled in a period of 15

Hospital Corps Recruiting	5
Jul. Enlistments 789 Enrollments 20 Total	809
Jul.	50
Aug. 29, 1916.	42
Sept.	28
Oot.	49
Nov	40
Dec. Hosp. Corps Reorganized	50
Jan. Hosp. Corps poster & pamphlet Pub.	77
Feb. Publicity Campaign Begun	127
Mar	187
Apr. WAR	1307
May	2/35
Jun.	1665
Jul	920
Aub Enlistment Limited to 125 per mo.	267
Sept /	163
oct.	175
Nov	332
Dec. Influence of Army Draft	775
Jan.	230
Feb.	2//
Mar Enlistment Allowed up to 300 per mo.	472
Apr Enlistment Allowed	1142
May With out limit	1508
Jun. Authorized Strength Reached	737
Jul Enlistments 9659 Enrollments 3839 Total	13498
Inactive Enrollments. Dental & Medical Students	1220
U.S.N 4 YR ENLISTMENT GRAND TOTAL 4 YRS. 147	7/8

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months, has been solved to a degree, but unfortunately it is difficult to make a well-trained and experienced assistant for a physician in a short time, no matter how much the training is intensified. To properly understand the difficulty of this problem, it is well to consider what type of person can be regarded as a well-trained and efficient hospital corpsman and what is the object of his training in the Navy. In the first place he has no counterpart in civil life. In the early part of his special training, we find him at a naval training school studying the theory and practice of many different subjects; in the next stage of his training, he has advanced sufficiently to be of value to the naval surgeon in the sick bay of a naval vessel; next he has become capable of acting as an efficient first-aid man on board a vessel or at a station where a medical officer is not regularly attached; by the last stage of his training, he has developed, in addition, a thorough knowledge of the clerical forms and procedures of the Medical Department of the Navy, a knowledge of the care and upkeep of medical supplies, and the ability to lead and control junior hospital corpsmen and patients with tact and judgment either aboard ship or at naval stations and in naval hospitals in any part

of the world.

At first sight, it may seem a simple task to train a man to be of value to a medical officer in the sick bay of a vessel, but even this degree of training is not easy to accomplish. At sea the medical officer is often, in the course of a short period, confronted with varied problems for the solution of which in civil life he could call upon a large number of persons of special training. At sea he has only himself and his hospital corpsmen. On shore, in civil communities, there is the trained nurse, the registered pharmacist, the stenographer and typewriter, the dental assistant, the laboratory assistant, the X-ray expert, and many others having special occupations upon whom the physician relies from time to time to help him in the care of his patients. If we look at the trained nurse in civil life, we find that here again is a subdivision into the surgical nurse, the nurse best able to care for contagious diseases, the nurse familiar with the care of the insane, the nurse who knows most about a fever case, the nurse specially able to care for the tubercular, etc. At sea the hospital corpsman, who to-day assists the doctor in the operating room, may to-morrow find himself placed in charge of an insane patient; the next case may be one of pneumonia, and the next one of diphtheria. He may find himself suddenly called upon to transport the wounded, either ashore with a landing party of marines, or from boat to ship, or up and down ship's ladders and through the narrow gangways and passageways of the modern battleship. He may be assigned as clerk in the surgeon's office, or to work in a ward where he is called upon to care for minor surgical conditions, expected to know how to sew up a scalp wound or dress a burn, and to prepare the operating room for a surgical operation or a microscopic slide for a bacteriological examination. When sufficiently trained to be of immediate value to a doctor in a sick bay at sea, he can do all of these things and more besides with considerable efficiency. The hospital corpsman is not a nurse, not a registered pharmacist, not a hospital orderly, but he is one who has begun to prepare himself for the difficult task of becoming of real and general assistance to the medical officer.

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The system of training the hospital corpsman in vogue before the war has stood the test of the great expansion of the last few months. The enthusiasm, interest, devotion to duty, and teaching ability of the doctors, dentists, pharmacists and others at the four elementary hospital corps schools deserve the highest praise. The efforts made by the medical officers at hospitals and aboard ships to carry on the training of these men at a time when they were busy with many varied and arduous duties, have been noted with appreciation. establishment of well-thought-out plans for the training of hospital corpsmen in conformity with the general policy of this bureau, undertaken by many ships and stations, and especially by the medical aides to the commandants of the naval districts, is an indication of the interest which all have taken in the training of these men. In many ways the cooperation and assistance of civilian pharmaceutical, dental, and medical schools, have been offered and utilized with the consent and appreciation of the bureau. The training of the hospital corps has gone smoothly on in spite of the growth of its schools from a prewar capacity of 100 to the present capacity of about 3,000 persons. At our four schools, the recruit is given a full six months of didactic instruction, infantry and hospital corps drill. these schools, he goes to the naval hospital where female nurses, doctors, dentists, and pharmacists supervise his work and lead him toward the acquisition of a practical knowledge of the subjects taught him at the elementary school.

Each naval district has in addition to the four regular hospital corps schools a system of training whereby hospital corpsmen of the Naval Reserve Force are receiving excellent continuous instruction at the district stations, on board district vessels, and often in the wards of civil hospitals and in the clinics of the larger cities, especially those of Boston, New York, Philadelphia, San Francisco, Los Angeles, Providence, and New Orleans. From the practical training received from the naval hospital and in the naval district, the hospital corpsmen flow sometimes to service with the Marine Corps for duty beyond seas, or to the air stations of the Naval Flying Corps, though most go to receiving ships for general detail to the vessels of the fleet. While at sea or overseas with active units, the training of the hospital corpsman continues as a part of his daily duty in accordance with

Naval Instructions 2642.

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On board the vessels of the Navy transport service where at this time a large number of hospital corpsmen are on duty, the more enthusiastic and ambitious hospital corpsmen are given the privilege of leaving their ship during working hours, when in port, to go into the city hospitals and clinics for practical instruction from civilian doctors and nurses so that they may return to their ships inspired by contact with the ideal conditions ashore, to simulate these conditions so far as may be practicable at sea. This plan has recently spread to the vessels of the Navy transport service at Philadelphia and at Norfolk and is now considered an especially active factor of When, after a time at sea, the hospital corpsman has become sufficiently trained to be of value for duty independent of a medical officer, he leaves the larger ship and is transferred to a naval vessel with a crew too small to rate a doctor. Here the hospital

¹ Hospital corps school activities in detail are reported on page 22 of this report.

corpsman takes an important place, and for a time his training ceases and he is left to his own resources to show whether it has or has not been successful. From these small naval vessels, the best hospital corpsmen, after a reasonable period of service, tend to be returned to naval hospitals ashore to improve their clerical, property accounting, pharmaceutical, and first-aid knowledge, so that they may be trusted for detail as the chief pharmacist's mates on destroyers where their training and ability are frequently tested by the medical and surgical emergencies produced by the present submarine warfare, when men injured by enemy gunfire, or burned by steam, or exhausted by exposure, must of necessity depend upon them for intelli-

gent first-aid treatment and care.

Time to gain experience is necessary before a hospital corpsman can qualify for advancement in rating. Promotion in the hospital corps is assured for the man who will study, observe, learn, and work in the field of his duty. Promotion has been perhaps somewhat more rapid in other branches where the best material may be advanced first and trained afterwards, but the work of the hospital corps is done for and upon human beings, where a mistake in dosage or in the administration of a first-aid measure might have serious The intelligent and efficient hospital corpsman is an important factor in maintaining the morale of the crew, and in helping to completely liberate their willingness to fight and work. There is plenty of opportunity for promotion in the hospital corps at this time. Four or five times the present number of pharmacist's mates, first class, are needed and will be advanced as soon as sufficient time has elapsed to enable them to qualify. Nearly twice the number of chief pharmacist's mates are needed for ships large and small and for naval hospitals, etc.

Every hospital corpsman, prior to advancement in rating, is given a careful examination by a board of medical officers. Recently the examination report has been modified in such a way as to give more weight to the man's actual experience and temperament without in any way lessening the importance of his mental and professional examination. It is not merely the ability of the candidate to answer questions that determines his fitness for advancement. He must be able to demonstrate to the board prior to advancement to the upper ratings that he can be trusted to do things correctly in a medical or surgical emergency, and to carry out first-aid measures properly until a medical officer can be reached. For those who qualify in upper ratings, and who in addition learn the clerical, commissary, and property-accounting requirements of a naval hospital, and who have a good knowledge of pharmacy and an ability to instruct junior hospital corpsmen there is ample opportunity for promotion

to the warrant grade of pharmacist.

Before the war there were 23 chief pharmacists and pharmacists on the active list; now there are 269 pharmacists and chief pharmacists, both temporary and permanent, on the active list, and 4 retired who have returned to active duty, making a total on active duty of 273. Each month a few are becoming qualified and are being appointed to this warrant grade as the needs of the Navy grow tailed for du Among the 269 pharmacists, 82 are permanent chief pharmacists of enlisted men Among the 209 pharmacists, 82 are permanent effet pharmacists schools." In examination, prior to being made permanent pharmacists of the

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As a recognition of the value of these officers they were given temporary commissions in the medical corps as temporary assistant surgeons, there being no commissioned rank in the hospital corps itself other than the commissioned grade of chief pharmacist, which during the past year could not legally be given until after six years of service in the grade of permanent pharmacist. permanent pharmacists thus temporarily commissioned constitute a group in the Navy somewhat comparable to the Sanitary Corps of the Army. The granting of a temporary commission has brought a degree of contentment and a sense of deserved recognition resulting in a better and wider opportunity for the deployment of their ability and knowledge in the Medical Department of the Navy. Their duties are, of course, limited to a special field, just as the musicians, chemists, lawyers, and other persons of value to the Navy, who have been commissioned ensign, lieutenant, etc., are detailed to duty in the Navy, where their special knowledge and ability is of most value.

Hospital corpsmen are transferred from ship to station and from station to ship by the Bureau of Navigation upon the recommendation of the Bureau of Medicine and Surgery. Before the war the men of this corps to be transferred were usually specified by name, now they are moved like all other members of the enlisted personnel, Before the war, the Bureau of Navigation controlled practically every transfer from Washington; now large authority for transfers of enlisted personnel has been delegated to commandants of the naval districts. Before the war, transfers of hospital corpsmen occurred, on the average, not oftener than once in a six-month period; since the war, transfers have been very much more rapid. The great enlargement of the hospital corps, changes in the method of transfer, and the delegation of wide authority to commandants of districts at a time when many new stations, hospitals, and ships were being commissioned, and when training was being speeded up, made it difficult for a time for the bureau to keep its men properly distributed. However, the changed conditions have been met and many of the difficulties overcome without undue disturbance, and with what seems to be as certain a knowledge of, and as definite a control over, the distribution of the corps in the service as is needed by the Bureau of Medicine and Surgery to insure its supervision over the professional competency of these men.

The total authorized enlisted strength of the Navy and Marine Corps is, by law, the basis upon which a computation of the total authorized complement of the hospital corps is made. The law of August 29, 1916, fixes the authorized complement of the Hospital Corps of the Navy at 3½ per cent of the authorized enlisted strength of the Navy and Marine Corps. A recent legal clarification of the meaning of "authorized enlisted strength" has in effect reduced the size of the factor upon which the complement of the hospital corps depends because in this recent definition the words "authorized enlisted strength" are said not to include "the Hospital Corps, apprentice seamen, those sentenced by court-martial to discharge, those de-Navy grow enlisted men of the Flying Corps, and those under instruction in trade narmacists of schools." In order that the 21

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harmacists ef pharmand 4 retired tive duty of re being ap tive statutor acists of th proper proportion to meet the needs of the service, both ashore and affoat, and to keep enough in excess of actual needs for training purposes, a few simple rules have been formulated for the determination of what constitutes a normal hospital corps complement for an active unit of naval and Marine Corps personnel. For instance, the following rules have been found useful:

One hospital corpsman for each five patients in a naval hospital. One hospital corpsman for every three beds for patients on a

hospital ship.

One pharmacist's mate, first class, or chief pharmacist's mate, for a unit of about 100 persons serving on a ship or at a station where

no medical officer is regularly attached.

One one-third hospital corpsman for every 100 persons in the naval complement of a naval vessel or station, or in the complement of a unit of the United States Marine Corps or Naval Flying Corps. These rules have proved their value except in a few instances

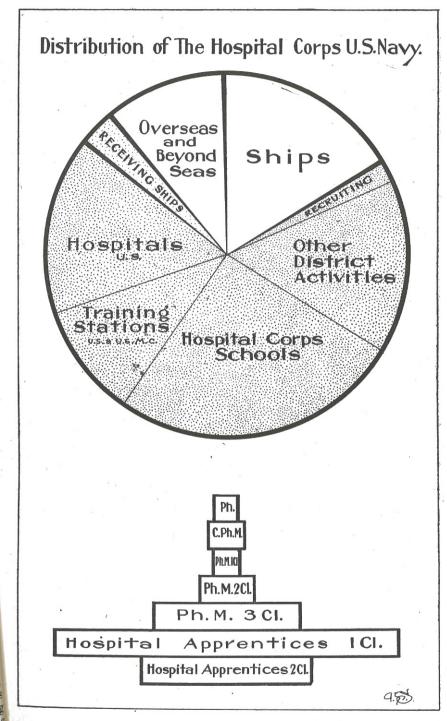
where special medical conditions have made exceptions to the rule

An estimate of the distribution of the hospital corps on July 1, 1918, showed that nearly two-thirds of the entire corps were on shore in the United States, over half of whom were in training to meet the needs of the coming winter and spring. The method of transfer by rating rather than by name, together with the difficulties created by censorship and the necessity for a degree of secrecy in relation to the movements of vessels, has increased the number of men of all enlisted ratings who are "standing by" on receiving ships, and the

hospital corps has been no exception to the rule. In order that these men may not waste their time on a receiving ship while awaiting transfer to a ship or station, an endeavor has been made to take instruction and training to them while awaiting transfer. Of the 14,718 men who made up the total of the hospital corps on July 1, 1918, 1,220 are medical and dental students who were allowed to enroll in the Hospital Corps Reserve Force for inactive duty in order that they might be for a time exempt from military service, so as to complete their medical or dental studies and in that way bring about a conservation of the Nation's future supply for the medical profession in conformity with the provisions of the selective-service law. All of the remainder, 13,498, were enlisted or enrolled for active duty, and are on duty at this time. Of these the following is the distribution by branch of the service:

United States Navy___ United States Naval Reserve Force____

Of those for the Regular Establishment 7,368 were enlisted for a period of four years; 2,291 for the period of the war. Of the United States Naval Reserve Force 66 were members of the old Fleet Naval Reserve, now class 1; 326 were National Naval Volunteers by recent legislation transferred to the Naval Reserve Force, class 2; and the remainder, 3,447, are members of the largest and latest class of reservists designated as class 4 for the general service. A study of the distribution of the hospital corps by ratings on July 1, 1918. shows that the medical and dental students were all enrolled as hospital apprentices, first class, and that they can advance in rating only when called to active duty, and then only after demonstrating



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ability for hospital corps ratings by passing the examinations, both practical and written, that are required for all members of the hospital corps. Those enrolled and enlisted for active service were distributed approximately by rating as follows on that date: 273 pharmacists, commissioned and warrant (retired, active, and reserve); 598 chief pharmacist's mates; 500 pharmacist's mates, first class: 900 pharmacist's mates, second class; 2,500 pharmacist's mates, third class; 6,000 hospital apprentices, first class; 3,000 hospital apprentices, second class.

Many physicians from civil life found it difficult to grasp the significance of the different ratings in the hospital corps, and in order that they might more quickly appreciate the Bureau of Medicine and Surgery's standard for these ratings, the ratings were

defined as follows:

"A hospital apprentice, second class, is a man in need of elementary hospital corps school instruction, or one who having been given elementary instruction is unable to hold a higher rating.

"A hospital apprentice, first class, is a man who has received elementary hospital corps schooling and instruction and who is in need of further careful, definite instruction and of practical work in the various duties which he is expected to perform.

"A pharmacist's mate, third class, should be a hospital corpsman sufficiently trained to be of immediate value to a medical officer in

the sick bay of a naval vessel.

"A pharmacist's mate, second class, should be a man sufficiently trained to be capable of taking charge of the hospital corpsman's work on board a naval vessel during the temporary absence of the medical officer.

"A pharmacist's mate, first class, or a chief pharmacist's mate (acting), should be sufficiently trained and experienced to be a capable, dependable, efficient first-aid man, upon whom the commanding officer of a vessel to which no medical officer is attached can rely for assistance in the handling of minor medical and surgical emergencies and who can be trusted to take charge of the medical

property and records of a naval vessel.

"A chief pharmacist's mate (permanent) should be not only so well trained that he is able to pass the comprehensive oral, practical, and written examination required, but he should in addition be one who has a particular fitness for the hospital corps. He should be a man who has the force of character necessary to control men and maintain discipline. He should have shown by his conduct a good example of subordination, courage, zeal, neatness, and attention to duty, and he should have convinced the medical officers with whom he is serving that he is capable of taking charge of hospital corpsmen at drills, of controlling their work, and planning details for their employment within the field expected of a chief petty officer."

A study of the outflow of the hospital corps during the past six months has shown that a good many men, in spite of the careful entrance restrictions, have, after entering the corps, left it. From January 1, 1918, to June 30, 1918, 4,215 men entered the corps and 982 men left it. The reasons for leaving the corps were as follows:

Expiration of four-year enlistment___ Change of rate to other branches of the service______601 Other causes____

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e n Of the 147 who left by expiration of enlistment, 110, or 75 per cent, reenlisted. Of those who left for "other causes," 54 left to receive commissions or to be trained for commissions; 142 left for discharge, either medical, special, bad conduct, dishonorable or undesirable, etc.; 30 died; 6 were lost at sea; 2 were killed in action ashore.

A careful scrutiny of the large number who changed their rate to other branches was made because at first sight it seemed that so large a number of changes of rate might indicate that the method of first selection for the hospital corps was in need of revision. It is believed, however, that even so large a number of changes of rate is not abnormal and is really an indication of a healthful condition in the corps. Most of the men who changed their rate did so shortly after enlistment, and half of the 600 who left were men who had come into the hospital corps, not because they desired to serve in this branch, but because enlistments for the Navy in other branches was limited to a very small quota, and they saw in the open door of the hospital corps the only road to enlistment in the Navy. The Bureau of Medicine and Surgery has, during the year, without exception, followed a liberal policy for every request for change of rating to another branch and has given its favorable indorsement to every request for change of rate, in the belief that those who were not fitted for the corps might be better adapted for another branch. To get rid of the misfits would increase, not only contentment in the hospital corps, but efficiency in the Navy. The man who graduates from the elementary hospital corps school, who stays in the corps until he leaves the hospital for sea, seldom leaves for another branch, because by that time he has learned enough about the care of the sick and injured to gain an insight into the character of the corps. Before he has had time to learn the duties of the hospital corps, he may restlessly seek the more easy and rapid advancement of another branch, especially if he has abilities, acquired in civil life, that will make advancement in another rating more easy. For instance, the typewriter and stenographer, or a man with a business clerical training, will seek to enter the yeoman branch and will not take time to learn to be a hospital corpsman; the mechanician will leave to become a machinist's mate, or to enter an aviation rating. The young man, however, who has a good grammar or high-school education, who is desirous of improving himself while in the Navy, who perhaps has no special abilities acquired in civil life, and especially he who contemplates upon return to his home a study of pharmacy, dentistry, medicine, etc., stays in the hospital corps, and will find experience and knowledge gained in it to his advantage in undertaking later studies or vocations. While there are, because of the influence of the selective service law, a few pharmacists, chemists, druggists, embalmers, X-ray technicians, bacteriologists, opticians, etc., in the hospital corps, their presence in it is due to the fact that they feel that in the hospital corps they will be able to learn how to care for the sick and injured, and in that way keep somewhat in touch with the medical profession, to which profession they were allied in civil life, because of their special qualifications.

The Bureau of Medicine and Surgery has, during the past year,

The Bureau of Medicine and Surgery has, during the past year, published and sent to each hospital corpsman, once a quarter, a pamphlet entitled, "Supplement to the United States Naval Medical

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Bulletin." The object of this publication is to enable the bureau to maintain a point of contact with every hospital corpsman and thereby engage his interest, to broaden the field of his vision, and to interest him in the variety of work being carried on by the members of his corps. It is a direct vehicle of instruction for the bureau and through its pages members of the nurse corps, dentists, doctors, pharmacists, and hospital corpsmen may talk to one another, make suggestions, and tell of ways and means to increase efficiency.

For the naval pharmacists, the leading members of the hospital corps, the Bureau of Medicine and Surgery has carried on a correspondence course, the object of which is to place before the pharmacist problems that are presenting, or might present, themselves in their special field throughout the service. From the written answers to each question sent in by the pharmacists, the best have been selected, published, and sent to all who took the course, so that, though widely scattered throughout the service, each member of this group has been given the opportunity to learn from the combined experiences of all.

It would be a serious omission to conclude this review of the hospital corps in 1917-18 without an allusion to the heroism of the members of this corps who are ashore in France. The Navy medical officers under whom they are serving have testified again and again to their courage and faithfulness. These men have endured hunger, fatigue, and cold without a murmur and cheerfully faced not only the fire that reached the trenches but that from the machine guns playing upon them in the open as they followed the attacking wave to pick up the wounded.

HOSPITAL CORPS SCHOOLS.

There are four regularly established hospital corps schools, one at each of the four principal naval-training stations.

School.	Normal capacity.	Average emer- gency capacity.	Greatest number at any one time.		
Newport, R. I. Great Lakes, Ill. San Francisco, Cal. Hampton Roads, Va.	250	500 1,500 500 300	900 2, 200 900 300		

The instruction is given by the medical officer in charge, a staff which sho of two medical officers, five pharmacists, and ten or more assistant only brief instructors, the last selected from the graduates of the school itself has been estimated by the instructors of the school itself has been estimated by the instructors. The medical officers in charge at the various schools during the Recently period covered by this report were: Commander Paul R. Stalnaker Navy, and Medical Corps, United States Navy; Commander John B. Kaufman Navy, have Medical Corps, United States Navy; Lieutenant Commander W. Hof Army pa Halsey, Medical Corps, United States Navy; Lieutenant Commande In anothe John Buckley, Medical Corps, United States Navy. The Bureau whose devot Medicine and Surgery had received from civilian sources, marput to the se

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offers of assistance in the training of hospital corpsmen. Of these the following have been definitely accepted and utilized: Medical and dental schools at the University of Minneapolis, with a fourmonths' course for 100 men (400 in all to date); College of Pharmacy, Columbia University, New York, giving a six weeks' course for 300 men; Philadelphia College of Pharmacy, giving three months' course for 150 men. Other civilian schools, hospitals, clinics, out-patient departments, and individuals have offered assistance which in many cases has been accepted and utilized to great advantage.

SPECIAL MEDICAL REPRESENTATIVES IN THE WAR ZONE.

Commander E. Thompson, Medical Corps, United States Navy, is stationed in London, as the bureau's representative at the American Embassy and to establish contact between the medical activities in waters adjacent to the British Isles and those operating ashore. He has kept the bureau in touch with the progress of military and naval medicine in Great Britain and in addition exercises supervisory con-

trol of our hospital facilities in London.

In France Lieutenant Commander R. G. Le Conte, Medical Corps, United States Naval Reserve Force, of the unit attached to the United States Naval Hospital, Brest, has, in addition to his duties there, been able to travel widely throughout the country, visiting military hospitals and the battle front and interviewing surgeons of prominence in order to report the latest developments in the care and treatment of the wounded. In July, 1918, on an occasion of great need, Lieut. Commander Le Conte and 11 members of his unit responded to telegraphic request for assistance and reported promptly for temporary duty at the American Ambulance, Neuilly, relieving members of the overworked staff of that institution and operating on hundreds of cases fresh from the battle line, the patients being exclusively from the members of the American Expeditionary Forces. Grateful acknowledgement of the services rendered

was made by the commanding officer of the American Ambulance.

Lieutenant Commander W. S. Bainbridge, Medical Corps, United States Naval Reserve Force, while on temporary duty in France, collected and arranged a mass of valuable medical information which is being utilized in the instruction of naval medical officers and in the

operation work undertaken in our hospitals.

Commander S. S. Rodman, Medical Corps, United States Navy, was detailed for duty at Gibraltar, a rallying point for ships serving in the Mediterranean, to maintain contact with Navy patients cared for in British institutions ashore and to conduct a dispensary service which should divert from crowded hospitals minor cases requiring rge, a solution only brief rest and treatment. As noted elsewhere a 50-bed hospital are assistant has been established at this also are assisted, has been established at this place.

during the Recently Commander J. F. Murphy, Medical Corps, United States R. Stalnaker Navy, and Commander R. G. Heiner, Medical Corps, United States R. Stalnaker Navy, have been detailed to north in Expansion of the Corps, United States B. Kaufman Navy, have been detailed to ports in France to assist in the handling

B. Kauling Hof Army patients embarking in Navy transports. In another part of this report are to be found the names of those t Command owhose devotion to duty under circumstances that try men's souls and The Bureas, manput to the severest test the sense of duty and the love of country has

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brought them to special notice and distinction. It is fitting, however, under the caption that heads these paragraphs to bestow a word of commendation on the officers who have so worthily represented the bureau, the medical corps, and the Navy in the trenches. The 47 medical officers and the 30 dental officers serving with the marines in France have in every instance done their full duty by the sick and wounded and they have been heroically seconded by the members or the hospital corps accompanying them. Conspicuously beautiful among so many heroic deeds was the conduct of the late Dental Surgeon W. E. Osborne, United States Navy, who deliberately gave his life for another on the field of battle, though the nature of his professional duties gave him every justification for remaining at the rear. Our medical officers have not been satisfied to remain ensconced at first-aid stations in trench and dugout, but have gone over the top with the men, cheering and encouraging them, and have led the way in person to search for the wounded and succor them.

SPECIAL DETAILS.

Rear Admirals W. C. Braisted and C. T. Grayson, Medical Corps, United States Navy, have served as members of the executive committee of the General Medical Board, Council of National Defense. Rear Admiral E. R. Stitt and Commander H. F. Strine, Medical Corps, United States Navy, were authorized to attend a meeting of the National Board of Medical Examiners, January 9 to 17, inclusive, New York, N. Y. Captain G. A. Lung, Medical Corps, United States Navy, was authorized to represent the Medical Department of the Navy at the annual meeting of the Association of Military Surgeons of the United States, at the training camp for medical officers, Fort Benjamin Harrison, Ind., October 8 to 10, 1917. Captain T. W. Richards, Medical Corps, United States Navy, has served as secretary of the committee on standardization of medical and surgical supplies and equipment, General Medical Board, Council of National Defense. Commander R. C. Holcomb, Medical Corps, United States Navy, has served on the subcommittee on venereal diseases of the Committee on Hygiene and Sanitation. Surgeon H. S. Cumming, United States Public Health Service, attached to the Bureau of Medicine and Surgery, Navy Department, Washington, D. C., has served on the committee for civilian cooperation in combatting venereal diseases. Commander R. C. Ransdell, Medical Corps, United States Navy, has served on the Committee on Hygiene and Sanitation. Commander G. B. Trible, Medical Corps, United States Navy, has served on the otology, rhinology, and laryngology subcommittee of the Committee on Surgery. Lieutenant Commander W. E. Eaton, Medical Corps United States Navy, represented the bureau on the Priority Board of the Navy Department; also represented the bureau on the genera hospital committee formed by the American College of Surgeons for hospital standardization program, December 8 and 9, 1917, Washing ton, D. C., and in conferences regarding rehabilitation and vocation education (see p. 32).

The work of the members of the United States Public Healt Service detailed to duty with the Medical Department of the Nat in the capacity of sanitary advisers of the commandants of nar districts and their medical aides and as inspectors of yards and st

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tions and adjacent territory has been satisfactory in the extreme. Their experience and special training qualified them to perform this important work in a thoroughly efficient manner and they have one

and all displayed most commendable energy and ability.

I wish to bring to your attention, in this connection, a matter which I think has no small significance and involves a radical change from the common view-point of earlier years. It is interesting to consider the effect of our large training camps and stations upon the life of neighboring communities. There used to be a disposition to regard the proximity of such camps and barracks as a possible menace to health and happiness. To-day, I believe, it will be conceded that the only menace is to the barroom and the brothel and to the unsanitary practices still far too prevalent in many sections of our country. People are beginning to realize that wherever we put our men we endeavor to improve the conditions under which they live, and, as these conditions involve or are dependent on the drainage, sewerage, garbage disposal, and water supply of near-by towns, efficiency in these important details often has to be increased in order to conform to the Navy standard. In the neighborhood of our camps flies and mosquitoes are exterminated and smallpox and typhoid fever are eliminated from our personnel. There has been no attempt and no desire to infringe on individual rights or to interfere with existing agencies, such as local and State boards of health, but the cooperation of these bodies has been sought and often their activities have been increased because the methods and results of Navy sanitarians have helped to create that public sentiment indispensable to reform. Our own sanitary inspectors and the officials of the United States Public Health Service working with the Navy at present often bring to light a situation not previously appreciated, and they unite with the civil authorities in correcting it.

In a number of instances the medical officer of a training camp or station has been invested with special powers by the chief health officer of town or State, thus enabling him to invoke the power of the law against those who, through ignorance or in their thirst for gain, disregard cleanliness and decency. It has sometimes happened that a small town has lacked the financial ability to inaugurate modern methods and the advent of the Navy has made larger disbursements possible. Again, there has been the incentive of patriotism. As more specific instances, may be cited the inspection of meat, milk and ice-cream, fruit, and cake offered for sale to our men, and again, in certain localities it has been necessary to inspect eating houses patronized by our men and the places where the food for them was prepared. The indirect benefit to civilians from steps of this kind can readily be appreciated. It is not always desirable to forbid the frequenting of eating houses and hotels which do not come up to the proper standard of cleanliness, but they can be classified and numbered according to their deserts and their relative standing can be made known to the enlisted personnel, who may usually be depended upon to patronize the best within their reach. In certain localities, purposely not named, where toilet facilities were primitive and the disposal of sewage and garbage was wholly inadequate, pressure has been brought to bear on the proper authori-

ties and has induced a marked change for the better.

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It should be said, too, that our medical officers, by the methods they put into operation and the standards they maintain in the field of preventive medicine, are doing an educational work for the country at large. The sailor who has been protected from smallpox and typhoid fever by appropriate treatment; who has learned of the danger of droplet infection through promiscuous spitting, coughing, and sneezing; who has learned the importance of washing his hands before meals and of avoiding the use of other people's toilet articles; who has had regular and constant instruction in details of personal hygiene returns to his home and becomes a disseminator of information and helps to break down prejudice against sanitary innovations and the newest health requirements.

In connection with the selection and special training of officers and men in the medical, dental, and hospital corps, and in matters of sanitary reform the faculties of colleges and schools, the boards of control of hospitals, local and State boards of health, and many private individuals have well illustrated and exemplified in themselves the lively patriotism with which the whole country is participating in the prosecution of the war.

SPECIAL INVESTIGATIONS.

AVIATION, GAS DEFENSE, SUBMARINE VENTILATION, ETC.—The special research conducted directly by the bureau has been restricted to those fields in which the Navy has a vital interest. Gas warfare, especially its defensive side, the ventilation of submarines and the type of food best suited for men serving on them, the standard of physical requirements in aviators and other matters relating to the personnel of aviation, ear protection, both for aviators and gunners, and the illumination of the midshipmen's quarters at the Naval Academy have been studied extensively and valuable data have been obtained. Early in 1917 Lieutenant E. F. Du Bois, Medical Corps, United States Naval Reserve Force, was ordered to duty in the bureau for the purpose of collecting information in regard to the various defensive measures against the poisonous gases used in modern warfare and to study the pathology and treatment of gas poisoning. Under his direction a course of instruction was begun at the Naval Medical School covering all phases of this subject. Lieutenant G. H. Mankin, Medical Corps, United States Navy, and Lieutenant G. M. Mackenzie, Medical Corps, United States Naval Reserve Force,

were assigned to duty as his assistants. Instruction was given to 20 commissioned line officers, 14 commissioned marine officers, 30 noncommissioned officers, and 11 hospital corpsmen of the Navy, as well as to medical officers. The average duration of the course was one week and it included practical demonstration in a specially constructed gassing chamber and training in the use of appropriate masks and other defensive measures. classes were given an opportunity to visit model trench systems, dugouts, shelters, and gun implacements at the engineer training camp of the American University Experiment Station, Washington, D. C., and some of the classes were afforded the further opportunity fication of D. C., and some of the classes were allorded the further opportunity under act to spend several days at the Marine Training Camp, Quantico, Va. under act and study the practical side of gas defense in the field. The pupils and at a

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returned to their several ships and stations and instituted similar courses of instruction. On the ships of the fleet gas-defense training is carried out by division officers under the direction of the gunnery officer, who, by virtue of his official position, is the gas officer and is held responsible for any deficiency in the gas warfare, both offensive and defensive, of his ship.

The curriculum of the Naval Medical School now includes a regular course of training in gas defense, and 130 medical officers have

already received this instruction.

In addition to the medical officers already mentioned, Lieutenants E. R. Noves and Frederick G. Speidel, Medical Corps, United States Navy, belong to the teaching force at the school, the former lecturing on the chemistry of gas warfare, the latter conducting the gas-mask

In April, 1918, Lieutenant G. M. Mackenzie, Medical Corps, United States Naval Reserve Force, was ordered abroad for the purpose of studying cases of gas poisoning at the front and to collect all available information with regard to gas defense and the ventilation of submarines. After a visit to the front and an observation of battle-field conditions he has returned to the bureau and contributed valuable additions to our knowledge of the pathology and treatment

of gas poisoning.

The service at large has been kept informed of the progress and development of gas warfare and appropriate defensive measures by the issue of frequent confidential circulars covering every phase of gas warfare. A list of over 200 published articles on gas warfare with a short note on each; description of the standard Navy gassing chamber; the subject of masks, alarms, defense tactics; the chemistry of gas warfare; the pathology and treatment of poisoning by gas

are among the topics discussed in these circulars.

Other confidential circulars for medical officers of the service have pertained to various phases of aviation, such as the causes of accidents, the effect of high altitudes, and the bibliography of the medical side of aviation. The aviator is exposed to such a diversity of rapidly changing conditions in his daily work that special care and thought are necessary on the part of the examining medical officer to select only those who are capable of thorough adaptation to these conditions. The bureau has endeavored to have on duty with aviation units, both here and abroad, medical officers fully acquainted with all the recent developments in the field of aviation which are of importance from a medical standpoint.

Lieutenants R. P. Parsons, Medical Corps, United States Navy, and L. H. Segar, Medical Corps, United States Naval Reserve Force, on duty with the Naval Aviation Detachment, at Cambridge, Mass., are doing valuable experimental work in connection with the psy-chology and with the physical aspects of aviation. These officers, as well as Commander R. A. Bachmann, Medical Corps, United States Navy, have written valuable papers on the selection of candidates for aviation. Lieutenant Du Bois has been working in conjunction with the Bureau of Construction and Repair with regard to the purification of air in submarines. Much of this work has been carried on under actual cruising conditions aboard submarines on patrol at sea antico, villa and at a submarine base, and his recommendations will contribute

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1 demonaining in systems, r training ashington, pportunity antico, Va., greatly to improve health conditions for officers and men assigned to

submarine duty.

Extensive experiments have been carried out at the Naval Medical School with regard to the fireproofing of clothing for those exposed to the flames of burning gunpowder, bursting projectiles, etc., and suitable recommendations have been made on this subject.

Lieutenant Commander G. B. Trible, Medical Corps, United States Navy, has made extensive studies of the difficult question of suitable illumination for midshipmen's quarters at the Naval Academy and has made valuable suggestions regarding ear protection for aviators and gunners. Steps are being taken to ascertain the value of a new

ear protector under the test of actual service.

The recently completed laboratory of naval hygiene at the Naval Medical School is to be used as a laboratory for gas investigation and gas analysis in connection with submarine ventilation and other kindred matters. Facilities are afforded for battery examinations and tests, ventilation experiments, gas-mask tests, and studies in connection with the pathology of war-gas poisoning.

Lieutenant Commander W. L. Mann, Medical Corps, United States Navy, has done work of great value at the Marine Barracks, Quantico, Va., in connection with field sanitation for troops, writing papers on this topic for the bureau's publications, and instructing medical officers and hospital corpsmen preparing for service in

the field abroad.

PSYCHIATRIC RESEARCH.—One or more medical officers of special training and experience in psychiatry have been assigned to the principal naval training stations to assist in weeding out the recruits, who by reason of latent insanity or mental inferiority would sooner or later inevitably prove unfit for military service, though they may have passed successfully the physical examinations conducted at the recruiting offices. The work of these medical officers has been of great value and their reports when complete will furnish important data for study and further research. To give some idea of the nature and extent of this work and what has been accomplished, the following facts are set forth:

At the Newport Training Station the subjects examined have varied from 800 to 4,000 in a month. Among 866 recruits interviewed during January, 1918, 16 defectives were discovered belong-

ing to the following categories:

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Constitutional intervers	Charact
Epilepsy	stupidity o
Epilepsy Hypochondriasis	correctly, por
Hysteria	2 correctly, p
Hysteria Imbecility	2 Criminal ter
Neurastricha =======	DILLE DOM
Neurasthenia Stammering Chronic morphine habitué	The The
Chronic morphine habitue Dementia praecox	for ned origin
Dementia praecox	The origin for petty offer inc. free
The last four cases were transferred to hospital for treatmen	Ports are and
THE TASE TOUT CASES HOLD	and a cana

The last four cases were transferred to hospital for treatment preliminary to final disposition.

Visits are made periodically to the hospital. During January 9 cases were recognized as follows:

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Constitutional inferiority	1
Dementia praecox	2
Gastric neurosis	1
Manic-depressive psychosis	3
Undiagnosed	2

During the conduct of "mast" three offenders were selected for examination. One man charged with lying was found to be a case of constitutional inferiority. A man reported for being absent without leave and again absent overtime proved to be constitutionally inferior and a victim of the morphine habit. A third offender reported for striking a petty officer and using obscene language was a moron.

All doubtful cases are marked "follow up" on the records and are carefully watched throughout the period of training. company commanders submit reports as to efficiency. If men prove unable to grasp the simple details of training or show abnormal tendencies of any kind they are reexamined and liable to discharge

from the service.

Naval Training Camp, San Diego, Cal.—The neurological and psychiatric examination of recruits was begun February 15, 1918. In the course of 44 days 309 men were studied and 22 were invalided from the service on account of nervous or mental disease. At the first interview about six minutes is devoted to each recruit. The history, attainments, school, and social career is rapidly reviewed to gain a knowledge of the previous conduct of the individual. A test of the reflexes and of stability and a general physical examination forms the basis of the first judgment by which a man is placed in group 1, normal, or 2, abnormal. Those in group 1 are outfitted with clothing and begin their training. Members of group 2 are subjected to more searching investigation and eventually are assigned to group 1 or definitely classified as neurotic or psychopathic.

Naval Operating Base, Hampton Roads, Va.—The head of the psychiatric division divides his time between the St. Helena Training Station (3 days), the Hampton Roads Station (2 days), and the

United States Naval Hospital, Norfolk, Va. (2 days).

All cases of mental abnormality are surveyed and go to the hospital for further transfer to St. Elizabeths, Washington, D. C., or are returned to their homes, depending on whether they require institutional care and threaten danger to the community or are harmless.

Commanding, regimental, and company officers, medical officers, and others have been requested to note and report all abnormalities of character or conduct, as shown by resentfulness to discipline, unusual stupidity or awkwardness at drills, inability to transmit messages correctly, personal uncleanliness, defacing of property, bad language, criminal tendencies, femininism, unusual irritability, shyness, excessive homesickness, etc.

The original examination on arrival or in connection with trial for petty offenses is brief, but followed if necessary by another covering from one to several hours. Then all data from records and retreatment ports are analyzed until every detail of personal and family history

and a full picture of the case is obtained.

1" Mast" is the term used at sea to designate the informal court held by the command-ng officer before which petty offences are tried or more serious cases receive a preliminary

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January.

Between August 1, 1917, and December 31, 1917, 363 cases of suspected abnormality yielded 191 cases for survey, classified as follows:

	4
Apoplexy	$-\frac{1}{34}$
Constitutional inferiority	_
Constitutional psychopathic state	
Dementia paralytica	_ 9
Dementia paracox	_ 36
Enilensy	
Enilensy Jacksonian	
Hemiplegia	
Hysteria	
Imbogility	
Malingering	DELF B
Migraine	
Nouresthonia	_
Neuritis, multiple	4
Neurosis, occupational	1
Nystagmus	2
Paralysis agitans	7
Paralysis of nerve	4
Paranoia	
Psychasthenia	
Psychosis, hysterical	-4
Psychosis, intoxication	9
Psychos's, manic-depressive	1
Psychosis, traumatic	1
Sclerosis, lateral	1
Senility	3
Stammering	
Under observation	Zolleri
The state of the s	

Naval Training Station, San Francisco, Cal.—During February, 1918, 440 men were given a preliminary examination on arrival and 42 were required to report for more exhaustive study. Of these 7 showed evidence of mental disease as follows:

	7
Epilepsy	1
	4
Feeble-minded	1
	1
Graves' disease	-
	7
Intovication psychosis	-

Of the first 1,000 men examined at the station 172 required further study, and of these 55 were found defective in greater or less degree, as follows:

Chronic alcoholic	2
Defective delinquent	0
Enuresis	2
Epileptic	10
Feeble-minded	18
Graves' disease	11
Psychoneurotic	9
Psychotic	2
Stammerer	1

The percentage of feeble-minded is lower than the average because of the large number of hospital apprentices and landsmen for yeomen recruits in this group. Also the percentage of goiters is rather high on account of several large drafts from Washington and Oregon. These goiters seem to be of the simple nontoxic type.

Manic-o Neurasi Organio Paranoi Paresis Psychast Traumat Becaus 6,604 mer

Were four Constitution Epilepsy — Imbecility — Psychopaths Psychoses, a

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The service and health records of the feeble-minded are being followed, with a view to determining more exactly the status of the imbecile in the naval service.

The psychiatrists follow carefully all cases reported for infraction of regulations and all cases coming to trial by summary or general court-martial. Besides this, "intelligence" or "efficiency" tests are applied to various groups of the personnel of the station with a view to selecting suitable men for different types of work.

Naval Training Station, Great Lakes, Ill.—This station by reason of its size (20,000 to 30,000 recruits) affords the widest and most intersting field for psychiatric research. The work was begun July, 1917, and by the end of the year 6,604 recruits had been examined. The positively psychopathic cases discovered may be grouped thus:

	The positively psychopathic cases discovered may be group	ea	thus:
	Constitutional inferiority Epilepsy Imbecility Psychopaths Psychoses, all other forms	43 21 49 13.	Per cent. 24 12 28 7 29
		177	100
	Of the 51 insane there were:		
	Angiospastic edema Chorea Dementia, cause unknown Dementia praecox Dipsomania Exhaustive, infective, and toxic psychosis Hysteria Intoxication psychosis Intracranial injury Manic-depressive insanity Neurasthenia Organic brain disease Paranoid state Paresis Psychasthenia Traumatic psychosis Traumatic psychosis		1 2 12 1 3 5 3 1 9 2 6 1 2 1
			51
	Because of poor work in the routine intelligence tests of 6,604 men 1,229 men were given prolonged examination. On were found to belong to the psychopathic class, as follows:	offer f th	ese 86
1			05

ŀ	Constitutional inferiority	25
ŧ	Epilepsy	14
ì	Imbecility	38
	Psychopaths	4
1	Psychoses, all forms	5
3		

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further degree,

U. S. Naval Training Station, Great Lakes, Illinois, Psychiatric Unit.

[Statistics covering July 1 to December 31, 1917.]

	Source.							
Diagnosis.	20 per cent of 1,229 cases.	Mast: of 65 cases.	Line: of 76 cases.	Medical: of 47 cases.	Total.	Per cent of pre- liminary exami- nations.	Per cent of ex- haustive exami- nations.	Per cent of posi- tive P-path.
Imbecility. Constitutional inferiority. Psychosis, epileptic. Constitutional psychopathic state Psychosis, etc., all other forms, as fol-	38 25 14 4	6 8 2 2	1 4 2 5	4 6 3 2	49 43 21 13	0.729 0.640 0.313 0.184	3.46 3.03 1.47 0.91	27.69 24.29 11.85 7.34
Psychosis, etc., all other forms, as follows. Dementia praecox. Manic-depressive. Organic brain disease. Hysterical Exhaustive, infective, toxic. Intoxication. Neurasthenia.	0	13 4 3 0 0 0 0 3	21 5 4 4 2 1 0	12 1 2 2 3 0 0 1	51 12 9 6 5 3 3	0.200 0.178 0.133 0.089 0.074 0.044 0.044	2. 43 0. 84 0. 63 0. 42 0. 35 0. 21 0. 21 0. 14	28.55 6.71 5.08 3.38 2.82 1.69 1.13
Neurasthema Dementia, cause unknown Dementia paralytica Paranoid state Psychasthenia Traumatic Dipsomania Chorea	0 0 0 0 0	2 0 0 0 1 0	0 0 1 1 0 0 1	0 2 0 0 0 0	2 2 2 1 1 1 1 1	0.030 0.030 0.014 0.014 0.014 0.014 0.014	0.14 0.14 0.07 0.07 0.07 0.07 0.07	1. 13 1. 13 0. 56 0. 56 0. 56 0. 56 0. 56
Chorea. Angiospastic edema. Intracranial injury. Not mentally abnormal	0	0 0 34	1 0 43	0 1 20	1,240		0.07 0.07 87.50	0.56
Total	1,229	65	76	47	1,417	99.480	99.80	99.75

REHABILITATION AND REEDUCATION OF THE WOUNDED.

Arrangements have been made with the medical department of the Army by which such Navy patients as may require vocational training, rehabilitation, reconstruction, the fitting of artificial limbs or surgical preparation therefor, may be received at one of the special hospitals conducted by the Army for the treatment of cases of this type. Information to this effect and specific instructions as to the proper procedure to obtain the admission of a Navy patient at these Army hospitals have been sent to all naval medical officers liable to have under their charge men who need treatment along these lines.

The bureau has studied very thoroughly the large and important question of rehabilitation and reeducation of the wounded as it concerns victims of the disasters of war belonging to the Navy and Inasmuch as we naturally anticipate that the demands upon us for this type of service will be far less than those which the Army must meet it seemed the part of wisdom and econwhich the Army must meet it seemed the part of wisdom and economic tall dressings and only not to multiply agencies or scatter in many scale articles in were shirter and were shirter and were shirter in the were shirter and the same articles in the same article talent available for this work. On the contrary a concentration in were shipp large establishments seemed to promise better results for both serv. Rod Navy. large establishments seemed to promise better results for both server Red Cross has ser ices. By sending our relatively small number of cases to Army Red Cross has ser rehabilitation hospitals we shall not have to divide the force of this rear and on the other hand ster this rear rehabilitation hospitals we shall not have to divide the force of ster this year. technical experts, which is none too large, and, on the other hand lous welcome our men may be expected to develop a sense of emulation and be stim and hospital effects. our men may be expected to develop a sense of emmation and be sense and hospital gifts ulated to ambitious effort through associations with large number and hospital ships of those in similar plight.

Lieutena Navy, has office of the Bureau, and resentatives a study of in helping to lishments con and furnish members of them, drew up Bureau and th up and submit ence committee on June 27, 19 Rehabilitation Vo. 90, approv nd charging th uty of providi en after dischar

In October, 191 rps, United Sta rps, United Sta dicine and Surg d on the work of 8, 15 naval stati ses, and 3 base e been organized large number o obiles have been the Red Cross or urgical dressings Red Cross. This es to devote all the ment in which the uring the winter assumed the dire e Red Cross. Th were shipped to

ntentment of the pa rious naval hospital convalescents.

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Lieutenant Commander W. E. Eaton, Medical Corps, United States Navy, has represented the bureau in numerous conferences with the office of the Surgeon General of the Army, the War Risk Insurance Bureau, and the Federal Board for Vocational Education and representatives of various governmental and civilian bodies engaged in a study of the whole problem. This officer has shown great energy in helping to develop a program by which existing industrial establishments could be brought to cooperate with the military authorities and furnish a ready-made field for training. A committee of 15 members of the conference, Lieut. Commander Eaton being one of them, drew up a plan for congressional action. Later the War Risk Bureau and the Federal Board for Vocational Education each drew up and submitted bills prepared after the one devised by the conference committee. The result of these various efforts was the passage on June 27, 1918, of Public Bill No. 178, known as the Vocational Rehabilitation Act, which amended the War Risk Act (Public Bill No. 90, approved Oct. 16, 1917), repealing section 304 of said act nd charging the Federal Board of Vocational Education with the uty of providing vocational training and employment to disabled en after discharge by the military and naval forces. (See page 80.)

AMERICAN RED CROSS.

In October, 1917, Lieutenant Commander W. E. Eaton, Medical rps, United States Navy, relieved Captain T. W. Richards, Medical rps, United States Navy, as the representative of the Bureau of dicine and Surgery with the American Red Cross and has also card on the work of organizing base hospital units, etc. Since April, 8, 15 naval station units, each comprising 5 medical men and 15 ses, and 3 base hospital units of 11 medical men and 60 nurses e been organized.

large number of motor ambulances and passenger-carrying auobiles have been donated to the medical department of the Navy he Red Cross or through its instrumentality.

orgical dressings and hospital garments have been contributed by Red Cross. This permitted our hospital corpsmen and female rtant es to devote all their time and energy to nursing and other emas it ment in which they could not be replaced.

ring the winter of 1917-18 Mrs. Josephus Daniels organized assumed the directorship of the Navy Department Auxiliary those Red Cross. This organization has made a large quantity of d econ-ial dressings and prepared hospital garments and linen, all of ups the were shipped to naval medical supply depots overseas or to ation in of the Navy.

Red Cross has served as a recruiting agency for women nurses

of Army cured for us a considerable proportion of the nurses added to force of ster this year.

The hand ous welcome gifts have been made by the Red Cross to hose to be stim and hospital ships which add to the comfort, entertainment, a number stentment of the patients. The recreation buildings put up at the source of much real benefit rious naval hospitals have been the source of much real benefit convalescents.

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COMMISSION ON TRAINING CAMP ACTIVITIES.

The Commission on Training Camp Activities, while concerned in the main with the larger and more accessible personnel of the Army, has done much to promote upright living in the Navy by disseminating information on the results of immorality and disease. campaign, which had its beginning within the Navy 15 years ago and was prosecuted with increasing vigor up to the present time, has been greatly enlarged and elaborated. By the end of the fiscal year 15 copies of the film entitled "Fit to Fight" had been put in circulation, of which 3 were permanently assigned to embarkation points and 2 were for circulation in the Navy. The pamphlet entitled "Live Straight If You Would Shoot Straight" has been liberally distributed to all naval establishments (35,200 copies). rious educational pamphlets, to the number of 82,800, have also been distributed. There is a stereomotorgraph for illustrating lectures in operation at each of 19 different naval establishments, and at 75 different naval establishments a total of 285 sets of exhibits have been displayed. The representatives of this commission have endeavored to cooperate with the medical officers of ships and stations in the fight for clean living, and the illustrated lectures, books and booklets, the moving picture films, and the stereomotorgraphs have undoubtedly succeeded in making a distinct impression upon the men. Lieutenant H. E. Kleinschmidt, Medical Corps, United States Navy, has been particularly active in this work.

EMERGENCY HOSPITAL CONSTRUCTION.

The emergency hospital construction made necessary during 1916-17 to increase the facilities of our 18 regular establishments with their aggregate of 3,000 beds so that the demands of the war could be adequately met, was conducted in a conservative way. I endeavored to proceed carefully and economically, keeping just ahead of immediate requirements, though an ampler scale of erection and purchase of buildings, a more lavish expenditure of funds would have relieved me of a heavy burden of anxiety as the one personall responsible for providing sufficient hospital accommodation for every contingency.

The work done and the work being undertaken at the time of m last report was fully discussed therein. During 1917-18 the san policy has been followed and additional buildings have been brough to completion and still others begun. The following is a brief sur mary of work covered by contracts awarded in 1918.

Chelsea, Mass.—Fifteen (15) ward buildings, 2 hospital corps by racks, 2 subsistence buildings, and 1 laboratory, giving a total b capacity of 600.

New London, Conn.—At the submarine base there was built

dispensary and sick bay, providing 50 beds.

Brooklyn, N. Y.—Four (4) hospital buildings, providing 272 b The construction at Brooklyn is of terra-cotta stuccoed and the flo are of reinforced concrete, making the buildings practically firepr

Pelham Bay Park, N. Y.—The original hospital, providing beds, was abandoned upon the expansion of the training camp, a new hospital was constructed, providing 750 beds.

.Ve bed vide tion Was W excer an a origin Non Han cluded Char vision ing add Paris ing 96 b Pensa Key T the bure providing school pu which can New Or providing Gulfport providing 1 Great La viding 1,300 Mare Islan viding 550 b Puget Sou viding 105 be The constr frame, one sto In addition were awarded designed and p Portsmouth, Chelsea, Mass Hingham, Mo 100 beds. Newport, R. I New London, Brooklyn, N. 1 Wards Island,

800 beds.

for 500 beds.

League Island,

League Island, Philadelphia.—Two (2) additional ward buildings were provided in addition to those constructed during the fiscal vear 1917. The 2 additional wards provide for 75 beds.

Cape May, N. J.—There have been constructed 19 buildings, pro-

viding 100 beds.

Annapolis, Md.—Here 6 buildings were constructed, providing 103 beds. One of the buildings was a large subsistence building to provide messing accommodations to care for the whole hospital reservation. The kitchen and dining-room capacity of the original hospital was too small to care comfortably for the original layout.

Washington, D. C.—No extension has been made at Washington except that a temporary tent storage building has been provided and an addition has been made to the mess hall and kitchen of the

original hospital.

Norfolk, Na.—A general storehouse was provided.

Hampton Roads (Naval Operating Base), Va.—Construction in-

cluded 34 buildings, providing 250 beds.

Charleston, S. C.—Various additions were made to existing provision of 24 buildings, increasing the nurses' quarters and furnishing additional subsistence and laundry space.

Paris Island, S. C.—Seven (7) buildings were constructed, provid-

ing 96 beds.

Pensacola, Fla.—Officer of the day's quarters were provided.

Key West, Fla.—The Ruth Hargrove Seminary was acquired by the bureau, and the buildings have been remodeled and added to, providing 150 or more beds. The buildings, originally laid out for school purposes and quarters, were designed with ample porch space, which can be utilized to increase the bed capacity of the hospital.

New Orleans, La.—Buildings to the number of 19 were constructed,

providing 200 beds.

Gulfport, Miss.—New buildings, 24 in number, were constructed

providing 150 beds.

Great Lakes, Ill.—Forty (40) buildings were constructed, providing 1,300 beds,

Mare Island, Cal.—Thirteen (13) buildings were constructed, pro-

viding 550 beds.

Puget Sound, Wash.—Ten (10) buildings were constructed, providing 105 beds.

The construction referred to above has been in general of wood

frame, one story in height.

In addition to the work mentioned above, for which contracts were awarded during the fiscal year 1918, the following work was designed and plans and specifications prepared:

Portsmouth, N. H.—Three (3) buildings, providing for 50 beds. Chelsea, Mass.—Eight (8) buildings providing for 400 beds.

Hingham, Mass.—One (1) sick bay and dispensary providing for 100 beds.

Newport, R. I.—Twelve (12) buildings providing for 500 beds. New London, Conn.—Six (6) buildings providing for 150 beds. Brooklyn, N. Y.—Eight (8) buildings providing for 524 beds. Wards Island, N. Y.—Twenty-one (21) buildings providing for

800 beds.

League Island, Philadelphia.—Fourteen (14) buildings providing for 500 beds.

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Gray's Ferry Road, Philadelphia.—Fifteen (15) buildings providing for 300 beds.

Cape May, N. J.—Six (6) buildings providing for 100 beds.

Quantico, Va.—Nine (9) buildings providing for 300 beds.

Norfolk, Va.—Twenty-one (21) buildings providing for 900 beds. Hampton Roads, Va.—Four (4) buildings providing for 500 beds. Charleston, S. C.—Twelve (12) buildings providing for 515 beds. Paris Island, S. C.—Three (3) buildings providing for 90 beds. Great Lakes, Ill.—Three (3) buildings providing for 200 beds.

Pearl Harbor, T. H.—Three (3) buildings providing for 100 beds. Since the war started a bed capacity of 12,000 has been provided and is in operation. Accommodations for about 5,000 more beds are either under construction or being designed. In all the work outlined above accommodations for the personnel of the hospital staff amounting to between 40 and 50 per cent additional of the bed capacity have been provided.

For overseas work the bureau sent 190 portable buildings for hospital use and has completed hospital groups at several foreign

stations.

THE UNITED STATES NAVAL MEDICAL SCHOOL.

During the fiscal year 1918 three classes of medical officers passed through the school. In the class from July 24 to September 22, 1917, there were 62 members; in that from April 1 to May 4, 1918, 23 members; and that from May 13 to June 22, 1918, 29 members.

Since October, 1917, 100 enlisted men have been trained in bacteriological and clinical laboratory work. Their training has been along the most practical lines to enable them to assist in various laboratory procedures, such as sterilization and cleaning of glassware, preparation of media, making of stains, culturing and staining of organisms, blood counts and smears, examination of faeces for intestinal parasites and ova, serology, urinalysis, etc.

Sixteen enlisted men have been trained in clinical chemistry. They have been instructed in urinalysis, examination of gastric contents, water analysis, gas defense methods, examination of milk, etc. Four of the men have devoted their time to advanced organic and inorganic

chemistry.

each unit.

Five mobile laboratory units have been equipped to meet any emergency which might arise in case of epidemics at various naval stations or camps. The packing boxes for material are prepared so that they may be converted into desks, tables, and stools. From one to three medical officers and from four to ten men accompany

Owing to the introduction of poisonous gases in warfare it became necessary to study problems of this kind as they relate to the Navy. Many other hygienic problems have also developed which require much study. As much of this work was assigned to this school it was very quickly seen that the room and equipment available for the purpose were entirely inadequate. Because of this condition an addition approximately 20 x 45 feet, with two floors and basement, was made to the building. When this addition is fully equipped it will permit the investigation of many of the numerous problems in hygiene which are constantly arising within the Navy.

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During the fiscal year there were received and filled by the Naval Medical School 192 requisitions for microscopical outfits and 247

microscopes were issued to ships and stations.

Examinations made by the clinical laboratory of sputum, blood, fæces, throat cultures, etc., totaled 2,138. In addition to this 7,078 specimens of fæces sent in from ships and stations were examined for hookworm. Six hundred and twenty-two, or 8.9 per cent were positive.

In the chemical laboratory in addition to the instruction incident to the school work there were made 3,834 analyses of various kinds. As the materials examined varied greatly in kind the analytical procedures ranged from simple tests to those of very intricate and ex-

acting nature.

The following working scheme for the instruction undertaken for one of the classes gives a fair idea of the ground covered:

May 13, 1918, to June 21, 1918.

Hours a. m.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9 to 10.	Med. Dept. duties.	Bacterio- logical laboratory.	Chemical laboratory.	Bacterio- logical laboratory.	Chemical laboratory.	Gas
10 to 11.	Naval hygiene.					defense.
11 to 12.15.	Preventive medicine.					Med. Dept duties.
Hours p. m.	,		Luncheon, 1	2.15 to 1.15.		
1.15 to 2.15.	Bacteri- ology.	Med. Dept. duties.	Ophthal-mology and otology.	Surgery and roentgen- ology.	Preventive medicine.	Psychiatry.
2.15 to 4.30.	Drills and first aid.	Drills and first aid.			Drills and first aid.	

MEDICAL AND SURGICAL SUPPLIES.

While the bureau, prior to the declaration of war, April 6, 1917, had accumulated a reserve supply of medical stores to meet any emergency that might arise, it was obviously impossible to foresee the enormous expansion that has taken place in the Navy during the past year, particularly the increase in the number of new ships and stations with a total personnel approximating 500,000 men. The most trying features connected with the expeditious handling of medical supplies were the lack of proper storage space and the lack of facilities for handling the supplies received and reshipped. Similar difficulties presented themselves to other bureaus, and the congestion at the navy yard, New York, to say nothing of the port of New York as a whole, retarded the work of the supply depot considerably. The inadequate storage space and the lack of proper facilities for handling large quantities of supplies were felt by the supply depot in Brooklyn, even before war was declared, so that the largely increased

demands became a very serious problem for the time being, which was only successfully met by the energetic and whole-hearted efforts and help of those connected with the supply depot, including both

the naval and civilian personnel.

This bureau had for some years sought authority to purchase land for the erection of a supply depot in Brooklyn, commensurate with the work it was being called upon to handle, but funds were not provided for this purpose until the deficiency act of June 15, 1917, was approved. A new supply depot was then quickly arranged for and the building rushed to completion. It was placed in commission in October, 1918. This building consists of eight stories and a basement, with all the latest appliances and facilities for the efficient handling of medical supplies both coming and going. The completion of this building has relieved the bureau of a serious problem and for the first time in a good many years it is felt that all demands for medical supplies can be met promptly. In view of the large number of ships to be taken over by the Navy in the near future, this relief has not come any too soon. The number of employees on duty at the supply depot has been increased from 45 men, before the war, to 111 men at

Another serious concern in connection with medical supplies was the present time. the question whether American manufacturers would be able to meet the increasing demands of the Army, Navy, and Red Cross, and at the same time provide the civilian population with necessary medicines, instruments, appliances, etc. The bureau has been agreeably surprised at the way manufacturers generally have met the siutation and, except in a few instances for which no one is to blame, have responded to practically every demand made upon them. The few instances in question concern such drugs as opium, henbane, etc., which do not grow on this hemisphere but were imported heretofore from countries with which the United States is now at war, or communication with which has been stopped for the time being. When the increase in the combined demands of the Army, Navy, and Red Cross alone are considered, it is marvelous that the manufacturers have been able to supply these articles so promptly, and without any impairment in quality. It should be realized, too, that a few stations, such as the ones at Great Lakes, Hampton Roads, Newport, and Pelham Bay Park, now consume almost as great a quantity of supplies as were required for the entire Navy prior to the beginning of

In April, 1917, the number of dental officers in the Navy was 30, while at the present time there are 473. What this increase has meant in the way of furnishing dental outfits, each outfit comprising innumerable separate articles, may well be imagined. There was a question whether they could possibly be supplied in view of the Army's requirements, which were of course greatly in excess of the Navy's. Some difficulty was encountered at first in securing the required number of complete outfits, but gradually, as different manufacturers realized what the ultimate demand would be, they have increased their facilities, and at the present time most of the dental material required may be secured in a reasonable time at only a slight increase

over the cost of the same supplies in the past.

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recessary he officer purchase 1 An idea of the increase in the supply depot's activities can be arrived at from the following comparisons:

A matter of grave concern to the bureau was the difficulty of locating or ascertaining definitely what ship or ships carried certain outfits, or stores, overseas, so that when a particular ship was sunk, or delayed for unforeseen reasons, duplication of shipment could not be quickly or intelligently ordered. This problem was met by the detail of a medical officer to the supply depot for the express purpose of keeping track of and tracing all shipments from the time they left the depot until they were placed on board a vessel and the vessel had sailed.

The supply depots established at Liverpool, England, and at Brest, France, respectively, are now running smoothly and fully meeting the urgent calls for supplies for ships operating in foreign waters, as well as furnishing the shore stations with necessary supplies.

The supply department was called upon during the past year to assist in purchases being made for the several Navy base hospitals, when expansion of the same was decided upon, and this extra work

has assumed large proportions at times.

The new supply depot at Mare Island, Cal., which was authorized at the same time that the supply depot at Brooklyn was appropriated for, is nearing completion and will be adequate to meet all demands for medical stores required on the west coast and by ships operating in the Pacific Ocean.

Intimate cooperation with the Bureau of Supplies and Accounts, as well as with the Council of National Defense and War Industries Board, has resulted in the satisfactory purchase of all necessary supplies other than those regularly issued by the supply depot, and, except for slight delays here and there, every requirement has been provided. At the present time, a considerable proportion of the articles used regularly by the medical department of the Navy has been commandeered by, or is under the strict supervision of, the government—as, for example, castor oil, platinum, optical glass, textiles, and woolen materials. The bureau is, however, being adequately supplied and no acute shortage has thus far been felt in any instance excepting in a few cases where substitutes may well be used. A general warning has been issued to the medical department regarding the necessity of conserving all supplies, particularly those in which a shortage is to be apprehended.

During the past year, the supply table of the medical department has been completely revised and improved in many essentials. Distribution of the new supply table, with corresponding requisition forms, has been made to all ships and stations. The issue of stores from the supply depot has been expedited by waiving the bureau's approval of requisitions when the same are not in excess of the supply

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The bureau is endeavoring, so far as practicable, to prevent unnecessary transportation of supplies across the continent by directing the officers on the west coast and at stations in the middle west to purchase needed supplies locally, when practicable, to relieve the con-

gestion of the railroads and reduce the work at the Brooklyn Supply Depot.

The large number of marine regiments and replacement battalions has necessitated issuing many regimental outfits and this work has added materially to the work of the supply depot.

The following is the report of the activities of the Medical Supply Depot, Brooklyn, N. Y., for the fiscal year 1918:

Number of requisitions filled. First quarter 974 Second quarter 1, 217 Third quarter 1, 447 Fourth quarter 1, 574	Value. \$336, 967. 46 651, 399. 09 574, 917. 51 897, 574. 60
5, 212	2, 460, 858, 66

It will be noted that during the present fiscal year 2,372 requisitions were filled in excess of last year. Of the above 5,212 requisitions, 4,642 were for medical supplies and 570 for dental supplies.

Twelve regimental medical outfits for use in field service were prepared and shipped from the depot for service with marines, each outfit consisting of between 140 and 150 specially marked and striped cases.

The above figures do not include issues to manufacture, depot use, or test.

The force now on duty and employed at the depot consists of 1 commanding officer, 10 officers (1 dentist), 17 enlisted men, 111 civilian employees.

Owing to the increase of work, and the congestion in the present main building, the depot has during the year been obliged to make use of the temporary corrugated-iron building, originally erected by the American Red Cross in the hospital grounds, and also of the depot lumber shed, in the hospital grounds, for the storage of medical supplies. In addition to these buildings in the grounds, two floors have been leased in a building outside the grounds, on Hewes Street, and three floors in a building outside the grounds on Flushing Avenue. All of this space was solidly packed with supplies.

During the year the depot has disposed of horses in favor of motor-driven vehicles, for use in moving shipments, and now has one 4½-ton truck, two 2-ton trucks, one express runabout, and one 5-passenger car for inspection trips.

PUBLICATIONS.

The bureau's quarterly publication, the United States Naval Medical Bulletin, has entered on its twelfth year of usefulness as a mean of distributing to medical and dental officers, to hospital corpsment and female nurses information regarding medical and surgical topic of interest. The high character of this publication is evidenced by the constant demand for it from many sources outside the service in all parts of the world. Thanks to the increase in medical personne and to the great bulk of the cases handled by them, the number of valuable contributions has increased and it has been possible to enlarge the size and scope of the magazine. The editor's special thank are due to Lieutenant Commanders W. A. Bloedorn and D. G. Sutton Medical Corps, United States Navy, for their able and unflaggin help as reviewers.

That portion of the subject matter having special importance for the guidance and instruction of members of the hospital corps is printed for distribution to them in the form of a supplement, which is a measure of economy, while insuring that the contemplated object is attained. The supplement is edited by the officer in charge of the hospital corps, Lieutenant Commander G. F. Cottle, Medical Corps, United States Navy.

The weekly Sanitary Bulletin (Confidential), prepared by the

Division of Sanitation, is discussed on page 49.

From time to time special publications of a confidential nature have been prepared by experts attached to the bureau, by which medical officers and others in the Navy have been kept abreast of the latest developments in defense against gas warfare, in the effects of gas, etc.

The edition of the Manual for the Medical Department issued last year was soon exhausted and it has been necessary to print 4,000 addi-

tional copies.

The Compend for Masters of Auxiliary Vessels, simplified and shortened, has been reprinted for issue on a larger scale as a guide for hospital corpsmen on detached duty and for commanding officers of small vessels carrying no medical officer. It accompanies the boat box.

The present Hospital Corps Drill Book is now being revised for

publication.

Posters and booklets devised by Lieutenant Commander W. D. Owens, Medical Corps, United States Navy, for use in the campaign against venereal disease were printed and circulated first for Navy

transports and later for vessels of the fleet.

The Division of Publications endeavors to be conversant with current medical literature and with the output of medical publishers, so that medical libraries of ships and hospitals may be supplied with necessary up-to-date reference books. Hospital corps training schools and the larger ships have been supplied with a special illustrated work on Principles of Surgical Nursing. Lelean's Sanitation in War and Goodwin's Field Service Notes have been provided for officers going abroad, serving with troops, or in camps in this country. Ships and stations have been supplied with the volume by Dr. J. F. Stokes, entitled "The Third Great Plague," and with the work of W. W. Keen on Treatment of War Wounds. One thousand copies of the pamphlet by Major General D. C. Shanks, United States Army, entitled "Management of the American Soldier," are to be distributed to the personnel of the Medical Corps.

Though not published by the bureau the new edition of Practical Bacteriology, Blood Work, and Parasitology and of Diagnostics and Treatment of Tropical Diseases, by Rear Admiral E. R. Stitt, Medical Corps, United States Navy, and the Naval Hygiene, recently given to the public by Captain J. C. Pryor, Medical Corps, United States Navy, are authorized and highly indorsed by the Medical Department of the Navy. These works are regularly issued to ships, hospitals, and stations, and this seems the most fitting place

in which to give them the praise they merit so well.

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DIVISION OF SANITATION.

The work of the medical department in the field of preventive medicine has been splendid, and having passed through the difficult period of mobilization the future may be faced with confidence. The health of the Navy has been excellent throughout the year, and for many weeks sickness rates have been lower than in peace times.

Too much credit can not be given medical officers of all grades for their zeal and tireless energy in imparting the details of military procedure and the special features of naval medical administration and practice to the new medical personnel, several times outnumbering the original trained corps, while laboring at the same time under the necessity of combating continually very real perils from communicable disease, the ravages of which could not altogether be escaped during the early days of mobilization.

During the past year many difficult problems which have arisen in connection with the unparalleled expansion of the Navy and the inevitable disease-producing factors incident to the war, have been

studied and overcome.

Experience in previous years has shown that an increased amount of sickness is always to be expected with an expanding Navy. During the past year not only has the expansion been enormous, but the rate of increase in new personnel has gone beyond all expectations. At times recruiting has proceeded at a pace faster than could be anticipated by new housing construction or enlargement of naval stations.

The dangers incident to overcrowding, beyond a doubt the most serious of all the factors leading to the introduction and spread of communicable diseases among military and naval organizations, have been operative much of the time. The winter was most severe and health conditions in general in the civilian population were unusually bad in many parts of the country. Pneumonia, always to be feared in the cold months, assumed this year most alarming proportions, and has been associated with unusually high mortality in all parts of the country. Under the unsettled conditions due to the war pneumonia developed to a degree where a change in type occurred, the streptococcic forms predominating in many places. The Navy in common with the rest of the country suffered damage from the pneumonias, but fortunately the cases among naval personnel were kept well scattered and devastating epidemics were avoided. At the same time the country experienced another year of unusually great prevalence of epidemic cerebro-spinal meningitis. This disease, which had prevailed extensively in England and France in 1915 and 1916, and was epidemic in this country and Canada when the United States entered the war, continued to be reported extensively all over the country in 1917 and 1918. Its continual introduction into naval stations by incoming recruits was therefore unavoidable, and an enormous amount of laboratory work in conjunction with constant watchfulness involving the application of most active preventive measures for its suppression was entailed in preventing the spread of the disease to an alarming extent. This was accomplished to an almost unhoped for degree. Only two outbreaks reached anything like serious proportions and these occurred because service conditions and necessities of war, over which the medical department had no who have head by retended bases sprum tary so overced tion in

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control, caused sanitary and hygienic requirements to be ignored for a short time at two large stations. Outbreaks of this and other

communicable diseases naturally followed.

Contrary to what would have been proper practice in peace times it has frequently been necessary to keep a training station running to capacity in spite of the presence of serious communicable diseases. Under war conditions it devolves upon the medical department to prevent and control disease in such a way that the least possible interference with the training of new men and other important activities will be caused, not only by the diseases themselves, but by the methods used in suppressing them. It is necessary for ships to sail or keep the seas, disease or no disease.

The Navy was called upon to fight almost from the day war was declared. It had no time to prepare and the demand for men and more men came at once. Practically every vessel in the Navy became a training ship overcrowded with personnel and this has continued to the present time through fair weather and bad weather. Excess complements of 30 to 50 per cent are common, and these conditions, of course, increase disease hazards very materially apart from the impracticability of bending all energies exclusively to the eradication of communicable diseases after their introduction into a ship. Men are bound to be exposed to infection in ships where frequent transfers occur or where large numbers of men are sent temporarily for training. This is particularly true of transports where outbreaks of communicable diseases among troops in passage have been the rule. Other ships have been forced to remain in unhealthy ports for long periods of time, particularly in ports infested by malaria.

Unusual hazards have also developed on shore in connection with the many new establishments necessitated by the growth and extended activities of the Navy. Operating bases, section and patrol bases, coastal air stations, rifle ranges, and industrial plants have sprung up in many places along both coasts. Frequently the sanitary surroundings of such stations have been bad, so that besides overcoming the difficulties attending the development of a new station in order to bring its sanitation up to Navy standards, it has not infrequently been necessary to bring about improvement of health

conditions in the environment.

In spite of the many circumstances tending to cause a high prevalence of disease and a high death rate good health conditions have been maintained, all training camps and stations have been enabled to continue without interruption their important work of providing man power for the fleets, and there has been practically no interference with the movements of ships. The general admission rate for the entire Navy, for all causes—disease, injuries, and casualties—during the six months from January 1 to June 30, 1918, is 716.50 per thousand per annum as compared with the average annual rate of 624.23 for the eight peace years, 1909 to 1916, inclusive. This is a low rate for the first half of the year containing as it does all the months which are bad from a health stand point—January, February, March, and most of April. Sickness rates tend to be low in the vavy during the summer and fall and even through December. The ndications are therefore, that the general admission rate for the ntire Navy for the whole calendar year, 1918, will be lower than the

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nything nditions had no average for peace times. The admission rate for recruits in training for the half year period was 1,086.04 as against the average rate of 1,272.99 per thousand for apprentice seamen during the eight year period 1909-1916, before the war. Since this class of personnel, characteristically showing a higher rate of sickness than all other classes except midshipmen, has given in these bad months a lower rate than the average whole year rate before the war the prospects for a very low admission rate, for the force in training ashore, for the entire year, 1918, are very gratifying.

Of the four large training stations three are well below the average, namely: Great Lakes Training Station, with an admission rate of 961.58 per thousand; Newport Training Station, 970.58; the training station at Hampton Roads, 1,110.69 per thousand. The San Francisco Training Station ran above the average with an ad-

mission rate of 1,483.64 per thousand.

The annual death rate for disease for the six-month period from January 1, 1918, to June 30, 1918, was 5.9 per thousand as compared with 2.7 for the 10-year period, 1907 to 1916. The rather high of cases of compared with 2.7 for the 10-year period, 1907 to 1916. rate for these six months was due to the unfortunate and unavoid- insects or o able combination of circumstances brought about by the rapid ex- messing and pansion of the Navy and the unusual weather conditions in the first quarter of the year, causing a death rate for disease during that civilian hea quarter of 8.9 per thousand. The death rate for the second quarter diseases and was low, 3.3, a figure closely approaching the average for peace and in locali times.1

The experiences passed through during the year have proved the that may m wisdom of creating a special division of sanitation in the bureau epidemiologic In accordance with existing law which authorized the assignment of 4. To make officers of the United States Public Health Service to the Army and water and Navy in time of war, 13 officers of that service were detailed for dut populations i with the Navy in June, 1917, and one was placed in each naval disand as to met with the Navy in June, 1911, and one was placed in cach in the state of mentric to assist and cooperate with the medical aide to the commandant 5. To direct

Realizing the vastly increased importance which all sanitary connosquitoes as siderations assume in time of war and desiring to elaborate and sysamp or within tematize our efforts in this field, a new division of sanitation was 6. To determ organized in the bureau with Lieutenant Commander J. R. Phelpliseases in the Medical Corps, United States Navy, in charge. Surgeon General to enlarge R. Blue, of the United States Public Health Service, contributed 7. To make no small measure to the success of this undertaking by the happen Surgeon G selection of Surgeons H. S. Cumming and C. Fox, United Statedical aide and Selection of Surgeons H. S. Cumming and C. Fox, United Statedical aide and Selection of Surgeons H. S. Cumming and C. Fox, United Statedical aide and Selection of Surgeons H. S. Cumming and C. Fox, United Statedical aide and Selection of Surgeons H. S. Cumming and C. Fox, United Statedical aide and Selection of Surgeons H. S. Cumming and C. Fox, United Statedical aide and Selection of Surgeons H. S. Cumming and C. Fox, United Statedical aide and Selection of Surgeons H. S. Cumming and C. Fox, United Statedical aide and Selection of Surgeons H. S. Cumming and C. Fox, United Statedical aide and Selection of Surgeons H. S. Cumming and C. Fox, United Statedical aide and Selection of Surgeons H. S. Cumming and C. Fox, United Statedical aide and Selection of Surgeons H. S. Cumming and C. Fox, United Statedical aide and Selection of Surgeons H. S. Cumming and C. Fox, United Statedical aide and Selection of Surgeons H. S. Cumming and C. Fox, United Statedical aide and Selection of Surgeons H. S. Cumming and C. Fox and Selection of Surgeons H. S. Cumming and C. Fox and Selection of Surgeons H. S. Cumming and C. Fox and Selection of Surgeons H. S. Cumming and C. Fox and Selection of Surgeons H. S. Cumming and C. Fox and Selection of Surgeons H. S. Cumming and C. Fox and Selection of Surgeons H. S. Cumming and C. Fox and Selection of Surgeons H. S. Cumming and C. Fox and Selection of Surgeons H. S. Cumming and C. Fox and Selection of Public Health Service, as expert advisers to this division. The hear of inspect cooperation of these officers and of those detailed for work in the a summary various naval districts, their zeal and ability, have been of the summary various naval districts, their zeal and ability, have been of the summary various naval districts, their zeal and ability, have been of the summary various naval districts, their zeal and ability, have been of the summary various naval districts, their zeal and ability, have been of the summary various naval districts, their zeal and ability have been of the summary various naval districts. greatest assistance to the bureau and to the service at large.

The organization for protecting the health of naval person st or which the The organization for protecting the health of naval personal of these office has kept pace with the Navy's growth and in its present state. The naval distribution of the naval distribution of the naval distribution of the naval distribution.

All the activities which are carried on by an efficient State departicipality is a All the activities which are carried on by an emicient State department of health have their counterparts in the Navy organization as are necessary to meet the needs of the set their medical

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ice. Each naval district has its own district health organization under the direction of the commandant with a medical aide to supervise and coordinate this important work at the various naval stations

within the district.

The duties of the sanitation officers attached to the several naval districts are to advise with and assist the medical aide in all matters relating to the public health and sanitation. Their duties take them constantly into all parts of the naval district to inform themselves and to keep the commandant and the bureau fully informed as to health conditions and sanitation.

The following instructions have been given for their general

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1. To make regular inspections of the sanitary conditions of naval stations and all places within the naval districts to which they are assigned, with special reference to water supplies, sewage, garbage, and manure disposal; to the introduction, presence, and disposition of cases of communicable diseases; to the presence of disease-carrying insects or of conditions favoring their growth; to the facilities for messing and housing the personnel.

2. To secure information by personal observation and through that civilian health authorities as to the prevalence of communicable diseases and sanitary conditions in the areas around naval stations

and in localities from which recruits are collected.

3. To advise and assist in eradicating any communicable disease the that may make its appearance in the district, and to make such real epidemiological investigations as may be necessary and practicable.

4. To make special effort to secure information as to the quality nt of y and of water and milk supplied both to naval forces and to the civil duty populations in the immediate environments of camps and stations, l dis and as to methods of disposal of sewage, etc., in such localities.

ndant 5. To direct particular attention to the presence of disease-bearing y conmosquitoes as well as to mosquito breeding areas either within the

d syscamp or within its immediate environment.

on wa 6. To determine as far as practicable the prevalence of venereal phelpsiseases in the civil communities adjacent to camps and stations,

general d to enlarge the measures used for their control.

uted i 7. To make reports, once a month, and oftener, if necessary, to happ he Surgeon General (Bureau of Medicine and Surgery) via the State hedical aide and commandant of the naval district, giving the rehear ults of inspections together with recommendations when necessary, in the d a summary of work performed during the previous month.

of th 8. In addition to the foregoing, to hold themselves in readiness to erform any unusual duties of this nature which circumstances sug-

ersonnest or which the commandant of the district may deem advisable. state off these officers have rendered valuable service.

The naval district organization is thus analogous to the district alth organization in a well-governed State. Just as a large

e departmicipality is able and is expected to look after its own welfare, anization the larger naval stations are fully able to take care of themselves the ser lipment to apply effectively all necessary health measures and to intain proper standards of sanitation in addition to furnishing dical and surgical treatment to the personnel. The district organiion therefore acts principally in a supervisory capacity toward such stations and its activities are limited for the most part to regular inspections by the sanitation officer, but he and the medical aide are frequently in a position to offer sound advice and assistance.

The smaller stations and scattered section bases are comparable to the less populous counties in a State and over their activities a closer supervision and control must be exercised by the district

medical organization.

So practical has the organization been made in some of the naval districts, notably the 13th, 12th, 1st, 3rd and 5th that formal advisory boards of health have been appointed by the commandants for the study of problems in preventive medicine arising in the district. These boards are usually composed of the medical aide to the commandant, the medical officer in command of a naval hospital, the sanitation officer, and the public works officer of the district or naval station. In one district the commanding officer of the receiving ship is chairman of the board of health.

These boards have accomplished excellent results and have done much to correlate activities for the prevention and control of com-

municable diseases in their districts.

So far as the fleet is concerned, the larger ships have fully equipped: medical departments and in general they are well able to handle their own problems. Should the prevalence and spread of disease overtax their resources the assistance and resources of the naval district are available in any large port on either coast.

The smaller vessels which return to port frequently, basing on a city or operating base, depend to a greater degree upon the naval

district to meet their routine needs.

Each district contains a well-equipped laboratory either directly under the jurisdiction of the medical aide and sanitation officer or provision is made for district service by the laboratory of the naval hospital base, or, as in the case of the 5th, 9th, 10th, and 11th Dis-

tricts, the laboratory of the naval training station.

The well-equipped diagnostic and bacteriological laboratory is a necessary part of the machinery of any health department confronted with the problem of controlling communicable diseases. Back of the district laboratories stands the United States Naval Medical School, which in addition to providing equipment and training personnel for the other laboratories, serves as a splendid research center. During the year the large and finely equipped Phipp's Laboratory in Philadelphia, with its director, Dr. Paul A. Lewis, has been taken over by the Medical Department of the Navy. This laboratory not only serves for the needs of the 4th Naval District but acts as a branch of the U.S. Naval Medical School laboratories for special research work.

In anticipation of winter demands, four mobile laboratory units were organized and equipped for field work by the United States Naval Medical School early in the fall. They were all urgently required before the winter was over and performed efficient service in meeting emergencies which would otherwise have overtaxed the resources of fixed laboratories in several of the naval districts.

Rear Admiral E. R. Stitt, Medical Corps, U. S. Navy, commanding the Naval Medical School has taken a deep interest in the work of the Division of Sanitation and has given valuable advice as to labors

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enviro Advice 1 to the Quarant Disinfect Laborato disease Education tory technique and diagnostic methods. The division has had the benefit of his notable experience in bacteriology and internal medicine and of his active cooperation in placing the resources of the school at its disposal.

Intimate relations have also been established with the Hygienic Laboratory of the U. S. Public Health Service and the spirit shown by its director, Surgeon G. W. McCoy, U. S. Public Health Service. and his assistants to aid in any way possible is fully appreciated.

The Surgeon General of the Navy presides directly over all these activities and inasmuch as he is charged among many other duties with responsibility for maintaining the health of the Navy, he is in virtue of this particular responsibility the chief health officer of the Navy. It is the duty of the division of sanitation to keep him constantly advised as to health conditions throughout the service, and the division is therefore directly concerned with his interest in:

(a) The maintenance of low admission rates for sickness and low

death rates from preventable diseases.

(b) Health conditions in naval stations and on board ship.

(c) Health conditions in civil communities, which constitute the

environment of naval communities.

It follows that the division should keep itself informed constantly, through regular and special reports and through sanitary inspections and by means of statistics, of:

(a) The need for action directed toward the application of the most recent discoveries in the field of preventive medicine and modern standard methods in the prevention, treatment, and control of

preventable diseases in the Navy.

(b) The need for action directed toward the reduction of preventable disease hazards among naval personnel, including Federal emplovees in industrial vards and plants operated by the Navy.

(c) The need for action directed toward improvement of health conditions in civil communities when the health of the Navy is men-

aced.

The Division of Sanitation endeavors to keep informed of advances in bacteriology and preventive medicine in their application to the management of the communicable and other preventable diseases, and of progress in other services, civil organizations, industries, and institutions for medical research.

In accordance with the above outline the following activities are

included in the work of the division:

1. The collection and compilation of morbidity and mortality statistics and the preparation of graphic records, charts, spot maps, and tabulations.

2. Supervision of the prevention and eradication of communicable

diseases through:

Epidemiological studies.

Advice in the application of preventive measures to the individual and his

Advice relative to hospital facilities and dispensary service in so far as relate to the control of communicable diseases.

Quarantine.

Disinfection.

Laboratory facilities in so far as they relate to the control of communicable diseases.

Educational propaganda.

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3. Supervision of sanitation at naval stations with reference to:

Water supply. Disposal of sewage.

Drainage.

Disposal of garbage and refuse. Extermination of insects and vermin. Toilet and bathing facilities.

Messing facilities.

Control of the milk supply and inspection of other foods.

Sanitation of buildings—approval of plans and recommendations as to adequacy for the number of personnel to be housed; the necessity for and adequacy of detention facilities and isolation or quarantine facilities; supervision of inspections to ascertain that conditions are satisfactory in these respects in both old and new construction.

4. Supervision in matters relating to ship sanitation and hygiene:

Study of ventilation problems.

Berthing.

Water supplies.

Sanitary fixtures; proposed alterations thereof and new installations. Quarantine and methods for the control of communicable diseases—disinfection.

5. Hygiene of the individual:

Education, care of the body, clothing and diet in so far as the Bureau of Medicine and Surgery is concerned.

6. Supervision in matters relating to industrial hygiene.

7. Cognizance of health conditions in civil communities and direction of extra-cantonment work in cooperation with local, State, or Federal authorities.

8. Social Hygiene:

Educational propaganda and supervision of activities in the field of social hygiene, cooperation with the Interdepartmental Social Hygiene Board, the Navy Department Commission on Training Camp Activities, the United States Public Health Service, and State and local officials.

VITAL STATISTICS.

The statistical methods put into effect in July, 1917, have proved satisfactory. A practical system of early and accurate morbidity reports, together with the necessary office machinery for prompt compilation of statistics for immediate use, furnish the only means of obtaining the information essential for the effective application of the measures which modern preventive medicine makes possible for the prevention and control of communicable diseases. This important matter was therefore the first to which consideration had to

be given. Prior to the war it was not considered necessary for the bureau to receive routine morbidity reports oftener than four times a year except from naval hospitals which were required to report weekly. After study it was found that the regular Form F card already in use was of itself an excellent morbidity report, but to be of any immediate value it became necessary to have the cards forwarded to the bureau daily, or as soon as the necessary information could be noted, instead of quarterly. This change was put into effect at once. In addition, brief weekly telegraphic reports were required from shore stations and appropriate changes were made in the forms submitted weekly from all naval hospitals. All deaths occurring in the Navy are reported to the bureau at once on a form which carries more

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On disser coveri complete data than the certificates used in civil practice. Copies of these are furnished the Division of Sanitation each week by the Division of Records and Pensions and from them accurate mortality figures are computed weekly as rates per thousand per annum.

From the various morbidity returns received, statistics are compiled and rates per thousand are calculated weekly for the principal shore stations, and for the Navy as a whole, ashore and affoat. From these figures graphic records, spot maps and charts are prepared for study and hung on the walls for ready reference. This enables the bureau to keep constantly posted as to the incidence and prevalence of communicable diseases. Reports of morbidity in civil communities are also received through the United States Public Health Service. These are spotted on a large map of the United States from day to day. Colored pins and inks to designate the various diseases are used in the preparation of spot maps and charts.

This system of morbidity reporting as applied to the Navy under its excellent discipline makes it possible to secure complete and accurate returns, something which civil communities have been striving for unsuccessfully for many years.

The continued growth of the Navy during the year has steadily increased the routine statistical work which is now under the immediate charge of Lieutenant (T) J. Holden, Medical Corps, United States Navy, acting as chief statistician. At present three assistant statisticians, eight clerks, and four punching and accounting machine operators are required to edit and compile daily the morbidity reports as received. The use of an accounting machine makes its possible for this small force to handle a vast amount of statistical work rapidly and economically.

PREVENTION AND CONTROL OF COMMUNICABLE DISEASES.

In addition to morbidity returns, regular and special reports are received from officers in the field. These refer not only to routine sanitary inspections, but include reports on nearly all subjects within the scope of preventive medicine. A monthly report by the senior medical officer of every shore station is required. In addition, each sanitation officer is required to submit a report at least monthly covering all stations in the naval district as well as health and sanitary conditions in adjacent civil communities. All these reports are carefully studied in the bureau with a view to determining what should be done and what can be done, alone or in cooperation with other bureaus of the department, to improve unsatisfactory and insanitary conditions.

The division has also been kept in more intimate touch with conditions in the field through frequent inspections by officers attached to the bureau and by visits of medical officers attached to ships and various naval stations.

WEEKLY BULLETIN ON PREVENTIVE MEDICINE.

One of the most important duties of the division is the prompt dissemination throughout the service of information relative to discoveries in the field of bacteriology and preventive medicine and their application in other Government services, civil organizations, industries, and institutions for medical research. This has been a matter of the greatest importance during the past year because the mobilization of large bodies of men both in this country and abroad has constantly presented for solution new problems in preventive medicine. Some of these have concerned the Navy directly and they have been studied by the division and by medical officers in the field. Valuable contributions to medical knowledge with special reference to preventive medicine have been made by the medical departments at some of the naval stations, particularly at the Naval Training Station, Great Lakes, Ill., where conditions afforded unusual opportunity for epidemiological investigations.

The war in Europe has developed many medical problems and some of the best brains in the world have been engaged in studying them. An endeavor has been made to place a true valuation on the reports of such studies as soon as they became available and to present such knowledge through the pages of the weekly bulletin, "Notes on Preventive Medicine for Medical Officers," to the officers in the field who could in no other way have had access to the exceptional sources of information constantly reached by the bureau.

In view of the fact that a large proportion of the medical officers now on duty entered the service after the beginning of the war, having had little or no previous experience in the prevention and control of communicable diseases, the weekly bulletin has furnished an excellent means to review the underlying principles of preventive medicine from the modern viewpoint. It has also served to inform officers, other than medical officers, of matters relating to the health of the Navy and to bring about a more lively realization that the personnel can not be kept well unless the essential requirements of sanitation and hygiene are maintained without being allowed to lapse even temporarily.

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In addition to other information the bulletin contains current morbidity and mortality statistics relating to the different stations and the Navy as a whole.

Many comments by medical as well as other officers and prompt requests for numbers not received on time indicate that this publication is of much value to the service.

HOUSING AND BERTHING.

When this division was organized a year ago the prevalence of communicable diseases, notably cerebro-spinal fever, scarlet fever and measles was still high, resulting from the first sudden mobilization of the Navy following declaration of war. Men were being recruited by thousands almost daily; housing accommodations at the outbreak of war were limited to four permanent training stations, which in the light of the present great stations, must be looke back upon as very small indeed. Fortunately the first tremendo increase in personnel came in the spring, and it was possible to avert disaster by the use of tents. In the meantime, by taking over armories, covered piers, summer hotels, old exposition building and other property, additional facilities were procured and whe such housing conditions were frequently bad from the standpoint

health and sanitation, they afforded the available shelter which had

to be obtained immediately.

At the same time the erection of rapidly constructed barracks was begun at training stations and upon new sites, such as Hingham, Mass., Bumkin Island in Boston Harbor, Cloyne Field, Newport, R. I., and in the navy yards at Philadelphia and Charleston. As was to be expected, these buildings, put up as rapidly as possible to meet the great emergency, do not compare favorably with barracks erected later from standardized plans. Thus the most pressing problem before the division in the summer of 1917 was the study of new housing conditions and needs. All things indicated that it would be futile to expect that the usual standards agreed upon as proper by hygienists and sanitarians could be attained. necessity to provide cover for all men before cold weather was urgent, and it was also essential that health hazards incident to barrack life should be reduced to a degree as consistent with safety as possible. The type of construction obviously required to meet war needs represented a radical departure from existing types and for all these reasons the question of standards had to be reconsidered from the viewpoint of new conditions. The English standard before the war was 600 cubic feet of air space and 60 square feet of floor area per capita, but it is well known that it has not been possible to maintain these standards under war conditions.

It is one thing to build barracks in accordance with certain standards, but quite another thing to insure that more men will not be housed therein than the buildings were designed to accommodate. With all things taken into consideration, it was concluded that communicable-disease hazards in the end would be met best by recommending minimum requirements to which adherence might reasonably be expected rather than standards unquestionably safer, but

unattainable under the circumstances.

It was considered that 5 feet between men in barracks under sleeping conditions was the minimum separation that could be recommended in view of the well known direct manner in which all diseases of the respiratory type are communicable; that 50 square feet was the minimum floor area consistent with this most important requirement, but that the standard for air space might safely be reduced to 450 cubic feet if compliance with the first two requirements were enforced, provided ample ventilation was maintained by sufficient window space and ventilators to insure not less than 3,000 cubic feet of air per capita per hour. These standards were low, but they afforded reasonable protection against the spread of communicable diseases, and it was hoped that adherence to them could be maintained.

They were recommended in September, 1917, and in general have been incorporated in new construction since that time. However, it must be said that buildings, properly planned, have frequently been overcrowded later by putting more men into them than they were designed to accommodate, and buildings which were designed before these standards were put into operation have continued to house more men than allowable under standard conditions. Complements have been reduced here and there upon the recommendation of boards of inspection, but overcrowding has persisted and at numerous

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stations floor areas as low as 30 square feet per man are still found. In no instance where these standards have been maintained has there been serious spread of disease. On the other hand, where marked overcrowding has existed, outbreaks of several communicable diseases have generally occurred promptly.

It is only fair to say that unexpected demands have made it necessary from time to time to increase the rate of expansion more rapidly than housing facilities could possibly be constructed. Realizing that this would probably occur, the expedient of berthing men alternately head to foot in barracks where overcrowding existed was recommended, together with the use of muslin screens between bunks or hammocks as adopted at the Great Lakes Training Station.

As soon as possible, buildings already constructed were studied and recommendations were made for alterations necessary to improve ventilation and bring them up to proper standards. Despite the best efforts to improve and adapt for use as barracks large buildings originally constructed for other purposes, experience during the year, as was anticipated, has shown that it is extremely difficult to keep men well when quartered in them in large numbers, even in the most favorable climate.

Apart from the standards mentioned above, quartering of men in groups as small as possible consistent with naval requirements has been urged constantly in the interest of the control and prevention of communicable diseases, and all the experience of the past year serves to confirm the wisdom of this recommendation. In places where climatic conditions have permitted the use of tents they have given excellent results.

For sleeping purposes, hammocks, cots, and double-deck standees are all commendable from the sanitary and hygienic viewpoint, if they are properly spaced. All things considered, it is in the interests of the service to accustom men to the use of hammocks before going to sea. A distance of 13 feet is ordinarily required to swing a hammock, and a building to accommodate two lines of sleeping men must necessarily be about 27 feet wide, whereas with bunks or beds a width of 20 feet is considered desirable, because there is then no temptation to put an extra row of bunks in the middle. The use of double-deck standees can be approved only where proper separation and cubic air space are insured. Serious objection must be made on sanitary grounds to the use of triple-deck standee bunks.

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THE DETENTION SYSTEM.

This system was in operation at naval training stations long before the war. A full three-weeks' period of observation of all recruits entering naval training stations or camps, direct from civil life, is absolutely essential to prevent repeated introduction of communicable diseases into the main camps from communities throughout the country. Unbroken incoming detention is unquestionably the most important single means of avoiding interference by epidemics with the functions for which the station exists, and the past year has shown that where incoming detention was broken it was impossible to prevent serious outbreaks of several diseases and material interference with the training period, to say nothing of the loss of life.

Theoretically an outgoing detention period is unnecessary. The theoretical view assumes that the main station or camp is clean. Practically, in war times at least, this is not so. Weekly reports from large stations show that nearly all the communicable diseases of the respiratory type are represented in small numbers almost constantly. Unrelaxing vigilance is required to prevent outbreaks of these diseases consequent upon continuous introduction of the causative organisms by visitors and men returning from liberty. Hence it is only by means of a full three-weeks' period of outgoing detention that the distributing station or receiving ship, and thus the fleet, can be protected against the introduction of serious diseases in epidemic form with drafts from the training station. A period of observation shorter than three weeks will not insure the detection of all cases of mumps and measles. This period of quiet also allows recovery from minor ailments-coughs and colds-so that the draft may at least be started from the station free from disease.

SANITARY MEASURES AND CONDITIONS AFLOAT.

No marked changes have been necessary in the regular cruising ships of the fleet. It has been sufficient to amplify existing facilities and enlarge the supply of medical stores. The personnel of the medical department on board was largely increased, so that young medical officers and hospital corpsmen recently enrolled could have practical experience of ship conditions. They have all received constant and regular instruction and have given practical evidence of the benefits received. In the beginning medical officers were assigned to torpedoboat destroyers. This was a wise step for the voyage over and until the new field of operations had become familiar. Later it was evident that, with base hospitals within reach and mother ships being at hand fully equipped to render elaborate medical service, the doctors could with advantage be replaced by competent hospital corpsmen of the higher ratings, thus making available more quarters for the additional officers needed to fight the ships. On many of the smaller ships, converted passenger and cargo vessels, yachts and patrol boats the crews have suffered minor discomforts and temporary privations, due to lack of refrigerating or electric plants, to primitive accommodations, to deck loads of coal, etc. No serious damage to health has resulted and the numerous petty annoyances have been cheerfully and patriotically endured.

Usually the smaller vessels with a complement of less than 120 men, especially those of auxiliary type, cargo carriers, and the like, have no medical officer, members of the hospital corps, selected for somewhat superior ability and judgment, being assigned to them. Many a hospital corpsman of great value, when serving under the immediate supervision of a medical officer, is unfit to meet the responsibility of independent duty. The hospital corpsmen, therefore, when alone should not be expected to do more than act as custodian of the medical stores, prepare the necessary returns, administer first aid, and serve as the commanding officer's instrument for attending

to minor sanitary observances.

It has been explained to the authorities that whenever the captain of a ship unprovided with a medical officer anticipates some particularly hazardous duty, or one taking him away from his usual route

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or to localities where epidemic diseases are prevalent, he should request that a medical officer be detailed for the duration of the voyage or other exigency and later should report when his services can

be dispensed with.

As a matter of economy of space and to economize in distilled water it has been suggested that showers be substituted for tubs in the sick-bay bath of battleships. This does not meet with favor from the bureau. There are many cases of sickness where immersion in a tub is desirable and where the shower bath would not be available or useful.

The medical departments of the vessels of the fleet are fully prepared for the hazards of battle. The battle dressing stations, located behind armor and equipped with hot and cold water, with electric sterilizers, operating tables, and ample supplies of surgical dressings, manned by skillful and devoted doctors and attendants, are ready.

A painstaking study has been made of all problems connected with the food and clothing of the men. Drinking fountains of the sanitary type are being supplied to our ships in increasing numbers, The delivery pipe leading to the mouthpiece should be inclined at an angle of from 10° to 20° in accordance with the results of the latest bacteriological studies. There is a real need for installing sanitary scuttle butts in or adjacent to firerooms and engine rooms, as the men in these compartments are the largest consumers of water and live under conditions of special strain and those least conducive to health and resistance.

U. S. ATLANTIC FLEET.

The rapid expansion rendered necessary by the existence of war with a nation that has made the intensive study of war its paramount activity for more than 40 years gave no time for leisurely preparation. Hence it was that many vessels of the fleet housed and cared for a personnel as much as 50 per cent more than normal. The usual training on shore, wherein the recruit was always held in detention long enough to account for the development of any contagious disease, was considered impracticable. As a result, an abnormal number of cases of cerebro-spinal fever developed. German measles, measles, and mumps, although producing great inconvenience, were Cerebro-spinal fever was epidemic throughout the United States at the time of mobilization, and, when this is considered, the incidence of this disease in the fleet was not great. Serum treatment was practiced from the appearance of the disease. There were 105 cases from April 1 to September 30. A systematic examination for carriers was conducted and but 10 cases occurred in the fleet from October 1 to December 31.

Practically every ship in the fleet has been operating during the war with a large increase of personnel. This has resulted in over-crowding and sleeping on deck, and billeting in spaces that had not been used as living spaces previously. An increase in communicable diseases, attributable to this unavoidable overcrowding, ensued, but at no time has a condition existed that could be considered alarming. Comparison of health conditions in the Atlantic Fleet (even in the early winter months) with those of the Asiatic Fleet, during the period of its greatest activity in peace times, gives a considerably

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lower percentage of disability in favor of the Atlantic Fleet during the past year.

Sanitary aids.—The following recommendation was made in the

inspection reports of battleships:

As present conditions require a number considerably in excess of the former complement of the ship to be housed, unusual care with regard to heating and ventilation is recommended. To this end CO₂ observations should be made and the temperature of living spaces should be maintained at as near 68

The following procedures are considered to have largely contributed to the maintenance of health:

The linoleum of decks after ordinary cleansing has been mopped with a saponaceous solution of cresol. Sanitary scuttle butts have been frequently disinfected with blow torches. The delivery tubes have also been given a slight angle of inclination, which prevents a vertical delivery. Spitkids contain a solution of formaldehyde.

Hammocks and cots have been so arranged that feet and heads of occupants

are opposite, when abreast.

Frequent exposure of hammocks and bedding to sun.

"Setting up" drill has been practiced every morning unless absolutely pro-

hibited by weather conditions.

Keeping the crew on decks whenever possible. In this connection the production of moving pictures deserves special mention.

After a brief course at the Naval Medical School and a variable period at a large naval hospital, the recently appointed assistant surgeons were assigned to large ships of the fleet, with experienced medical officers who acted as their instructors, so that after some months of intensive instruction, they generally became sufficiently proficient to be available for assignment for independent duty. As many as three recently appointed medical officers have been attached to the larger battleships at the same time. The fleet has in this way provided the best practical training school for medical officers.

Members of the hospital corps assigned to the fleet have been subjected to the most intensive training. This has followed, generally after a course at one of the several hospital corps training schools ashore, some of which, fortunately, were reestablished on a comprehensive scale, in 1914. Special instruction has been given to those showing particular aptitude with a view to fitting them to give expert first-aid treatment on smaller vessels of the fleet, to which the detail

of a medical officer was not practicable.

After a period of seven years' use there has been no appreciable improvement in the combined heating and ventilating system of our ships, and all the original defects pointed out in the past still exist. The humidifying apparatus designed to furnish a proper amount of aqueous vapor to the heated air absolutely fails of accomplishment. In vessels wherein little or no intelligent attention has been given to the system, during cold weather, when heat is furnished, the dehydration of the air is so great as to render the heated compartment unfit for habitation and provocative of chronic inflammation of the respiratory mucous membranes.

On vessels wherein the greatest attention has been given to the system, it has still proved most unsatisfactory. The personnel required to maintain the proper temperature is excessive. As soon as a temperature greater than 68 F. is reached, the low relative humidity immediately becomes most apparent by its disagreeable

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during the ted in overhat had not n communiding, ensued, dered alarm-Fleet (even Fleet, during a considerably effects on the mucous membranes and prolonged exposure has even induced minute hemorrhages of the nasal mucous membranes. On the other hand, compartments remote from the source of heat have been so much underheated as to necessitate the installation of accessory electric heaters.

Vessels of the fleet, including all battleships prior to the ships of the *Florida-Utah* class, and all other vessels are heated by steam radiators, which are much more satisfactory from the sanitary point of view. Ventilation is generally accomplished by supply and exhaust systems and is, in the main, satisfactory.

The requirement in the "Manual for the Medical Department" that "routes to dressing stations should be indicated by an arrow and a red cross" is complied with in the fleet. The pattern installed in the latest vessels is not satisfactory in that it does not sufficiently arrest the attention or indicate direction clearly, nor are the signs put up in sufficient number to be of practical service. They are made of metal, 7 by 4½ inches, and are secured to bulkheads by four screws. The background is of dark green; there is a red cross 3 by 3 inches and a white arrow 1 by 6 inches, located above the cross. Against a white bulkhead, the green background largely destroys the attention-directing element of the device. It would accomplish the purpose more fully if it had a background of white, a red cross, and a black arrow and the entire device were in a continuous line. Also, it is believed that it would be better if the arrow were placed in front of the red cross instead of over it.

Table of epidemic diseases in the Atlantic Fleet.

	Measles.	German measles.	Mumps.	Cerebro- spinal fever.	Scarlet fever.
anuary. 1917.	66				
February	44 32	19 37	14 27	1	2 8
pril	124	68	175	29	13
Лау	358	309	402	40	29
une	214	195	549	24	11
uly	31	48 21	344 179	4 3	
ugust	15 24	9	118	3	
September	19	19	130	2	
Vovember	30	5	200	5	
December	40	20	390	3	14
Total	997	750	2,528	115	80

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Protection against lethal and lachrymatory gases by appropriate masks has been effected to a great extent, but it is to be hoped that improved devices will secure an even greater amount of protection, with much less interference with the wearer's efficiency. A good beginning has already been made in the training of both officers and enlisted personnel in this now generally recognized method of warfare.

Protective measures have likewise been devised against powder ignition flash and flame; uniform protection by suitable devices is under consideration.

The following are extracts from the annual sanitary reports of

individual ships:

U. S. S. Celtic.—It is strongly recommended that neither officers nor enlisted men be ordered to this ship for passage when it is loaded with cargo, except in cases of most urgent necessity. When holds are empty probably 150 men can be carried. During the past year men have been ordered to this ship in such numbers as to cause hardships and suffering and constitute a menace to all on board.

U. S. S. Cheyenne.—It is recommended that some man, necessary to the operation of a submarine (cook or gunner's mate, etc.) be sent away for a course of intensive training in first aid and be then assigned to that additional duty on a submarine. Every submarine officer with whom the plan has been discussed considers it decidedly

good.

U. S. S. Delaware.—At present the number of the crew is 204 in excess of complement. The excess of complement during the past year has probably averaged about 200 or more. This has necessitated a crowding of berthing space, but in general the ventilation of the ship is good. The heating system as a whole is satisfactory.

Some of the blue serge trousers issued from the small stores were found to be of inferior material and did not give satisfactory service. Clothing issued to some men at training stations faded to an ugly purple gray and did not wear well. Otherwise the clothing has been all that is desired and all members of the crew were well supplied.

U. S. S. Louisiana.—The medical officer having been put in charge of the heating and ventilating systems of the ship arranged to have two-hour thermometer readings in various compartments in an effort to maintain a temperature of from 68° to 72 F. To obtain definite results from his daily sanitary inspections he devised a form on which to enter his observations, and this systematic record and re-

port is now adopted on all vessels in battleship force No. 1.

U. S. S. Melville.—The daily average complement, which in 1916 was 339, has gradually risen to 702 without noticeable relative increase in sickness from overcrowding, due to the fact that the character of the duty performed by the vessel makes a maximum amount of ventilation available at all times. The Melville is a mother ship for the destroyer force, and acts like a hospital ship in relation to its sick. The Melville has taken care of practically all of its own cases, except the contagious ones, 65 out of 87 transfers to British naval hospitals being of that type, usually measles or mumps. All operative cases have been attended to on board. The operations were: Major, 25; minor, 9; administrations of salvarsan, 143. The 25 major operations were for: Appendicitis, 11; hernia, 10; empyema, 1; goiter, 1; perinephritic abscess, 1; arthrotomy, 1. No deaths or serious infections followed the operations.

Favorable comment is made on the Stokes stretcher, which is peculiarly useful on destroyers. The "Neal-Robertson" stretcher had only its relative cheapness in price to recommend it over the Stokes

device.

U. S. S. Mississippi.—The complement of the ship consists of 63 officers, 60 chief petty officers, and 1,061 other enlisted men, including the marines, a total of 1,184. However, from time to time additional men are sent to the ship and billet hooks have been put up for

Scarlet fever.

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nst powder e devices is 2,000. The greater part of the men are recruits and have not the esprit de corps of the older service men. This is very manifest in

their indifference to the cleanliness of the deck.

It is to be regretted that with the plentiful supply of air by the plenum system little provision has been made for exhausts except in the engineering compartments and heads. Practically all the air from the shell, powder, and handling rooms and from the compartments on the third deck escapes by hatches to the second deck. As a large part of the vitiated air from the second deck must escape to the main deck by hatchways, the ventilation of these decks is complicated by the vitiated air from the decks below.

As forced draft is used exclusively in the firerooms, the air supply is ample and the danger of causing heat cramps by changing from natural to forced draft is eliminated. A bad feature of forced draft by the closed fireroom system, which this ship has, is that the upper parts of the firerooms become intensely overheated, reaching a temperature of 180 F. or 200 F., so that it is hazardous for the firemen to work up there, as is often necessary. Outlets for this excessive heat can not be provided in this system because an air pressure of eight and a quarter inches of water greater than atmospheric pressure has to be maintained. In the Howden system of forced draft this condition does not obtain because the air is led by piping directly to the burners and it is possible to have the firerooms open

While discussing the ventilation of the firerooms it should be mentioned that one hundred and twenty men are billeted in the large air ducts on the second deck around the uptake. These air ducts draw air from the large open intake abaft the bridge and from two cowls on the superstructure deck. They exhaust to the blower rooms below through gratings in the deck covering air ducts. The draft in this is consequently terrific. The air is certainly completely renewed in less than a minute. The differences in temperature in various parts of this compartment are extreme. The air ducts are so large that they are really a compartment, and while the temperature under the cowls and at the forward end was at the freezing point a temperature of 70 F. was recorded in the afterpart. Men billeted there have been very subject to respiratory infections and have repeatedly complained of the condition. Recommendations to

abandon billeting in the air ducts have been made.

The lighting arrangements are very satisfactory. The crew spaces are all well above the water line and armor plates and have, therefore, sufficient ports to admit daylight. As the bulkheads and overhead are painted white the diffusion of light is adequate. The artificial illumination is of the direct type with incandescent lamps, placed on the deck overhead. As these are covered with prismatic glass cylinders the light is well diffused and there are no exposed filaments to impinge on the retina. The lighting is about sufficient to keep the spaces from being gloomy, but not enough to make them cheerful. On the average there is one 40-watt lamp to 1,400 cubic feet of air space. The illumination on mess tables is about 1.5 foot candles. If it were not for the reading room the illumination would be insufficient. In the crew's reading room the lighting is by 40watt overhead lamps with bowl-shaped holophane reflectors. The

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average there is one 40-watt lamp to 500 cubic feet of space and about 2.5 foot candles on the tables. In the sick bay the illumination, though by the same method, is much better. There is one 40-watt lamp to 800 cubic feet of space. In handling rooms, workshops, and storerooms the illumination is not very good, yet with the use of portables for close work it suffices. These lamps are also incased in prismatic cylinders.

In the crews' and officers' galleys the wash sinks are piped for both fresh and salt water. This is a very dangerous condition, because with leakage or accidental use of salt water on mess-gear and cooking utensils, polluted or infected water from over the side is liable to cause disease. It has been recommended that these lines be plugged. This condition fortunately does not obtain in the pan-

tries, as they are piped for fresh water only.

Except for removable seats and fresh instead of salt-water showers the heads and washrooms of this ship show no improvement on the older types. There is the usual crowding of water-closets, urinals, wash troughs, and showers in a small washroom. The percentage of heads, showers, and the like is about the same and the fixtures are

identical in pattern with those in vogue for many years.

The showers, of which there are four, are piped for fresh water only, which is to be commended, for the uncomfortable sticky condition of the skin which follows a salt-water bath discourages the frequent use of showers when supplied with salt water. Water can be heated to any desired temperature by the usual type of Jenkins's steam heater. Save that cooking is done by oil burners, there is no new departure in the commissary arrangements.

There is a large incinerator tank operated by oil situated on the superstructure deck abaft the smoke pipe. It has three oil burners and very efficiently consumes all the rubbish and refuse of the ship. It is able to handle garbage without expressing the water in it, and so makes a garbage press unnecessary. The escape from the incinerator runs into the smoke pipe and there has been no discomfort from

the odors that emanate from so many incinerators.

The sick bay and operating room are as they should be, the finest show place on the ship. The sick bay is athwartships forward on the second deck. It measures about 16 by 60 feet, has a deck area of 960 square feet, a gross air space of 7,496 cubic feet, and a net air space of about 6,575 cubic feet. There are 12 double-deck enamelediron bunks of a type that can be swung up when not in use. are spaced alternately 3 feet and 5 feet from center to center. Calculating from the net air space there are about 275 cubic feet of air space per bunk, which, though too little if all the bunks were occupied, is ordinarily ample. Ventilation and heating are by the thermo-heater system of hot air, which supplies 1,600 cubic feet of air per minute, or enough to effect a renewal in 4.7 minutes.

The forward battle dressing station is on the third deck between the number two barbette and the conning tower foundation. It has a deck space of about 2,000 square feet. There is a water tank of 128 gallons capacity, and provision for heating water both by electricity and steam. There is a cast-iron sink covered with porcelain, with faucets for hot and cold water and a sanitary scuttle butt. There are four tables, measuring 5 feet by 2 feet, screwed to the bulk-

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head. There is an electric instrument sterilizer, 16 inches by 8 inches

and 6 inches deep.

The after battle dressing station is located aft of the number four barbette. It has a deck space of 1,200 cubic feet. Unfortunately this compartment of the ship is unheated, and in spite of recommendations made nothing has been done. It is equipped in the same manner as the forward station, except that the surgical instruments to be used here are to be removed from the operating room when the

ship is cleared for action.

Much has been done to make the crew happy and comfortable, and the finest thing of all is the crew's reception and reading room. This room, measuring some 60 by 20 feet, is situated on the main deck aft. It has half a dozen ports opening on the quarter deck which admit daylight, and it is well provided with artificial illumination. In it are tables, leather upholstered transoms, and chairs. A chair may seem a very simple article of furniture, yet few are the ships on which an enlisted man ever gets an opportunity to sit in a chair. There are several bookcases. For the convenience of women visitors there is a head adjoining the reception room. The general equipment of the room is like that of officers' quarters. The furniture is of steel, finished in olive green, with brass trimmings. The table tops are of composition colored green. The transoms are upholstered in leather. The deck is covered with red linoleum. It can comfortably accommodate about 80 men. A reception room like this is very conducive to happiness and good fellowship.

U.S. S. Montana.—Between June 27 and July 9, 1918, there developed in the crew 61 cases of acute gastroenteritis marked by severe retching and vomiting of bile-stained material, pains in stomach, cramps of bowel, and simple diarrhea. There was no mortality. Careful investigation failed to determine the cause of the outbreak. An examination of the water storage on board revealed in the port scuttle butt a gelatinous mass three-fourths inch thick on the bottom and one-eighth inch thick on the sides and two tufts of cotton waste were found in it. The potatoes being served as part of the ration were old. It could not be proved that either of these facts had

anything to do with causing the gastroenteritis.

U. S. S. North Carolina.—Nitrogen-filled electric lights have been used with success. Bulbs manufactured with glass of a blue tint. give a balanced spectrum closely approximating that from a white cloud, through the removal by filtration of the excess of red and green rays. Lamps of this type will always be valuable in the medical department for microscopic work at night, ear and throat work, and examination of skin lesions and they are especially useful when, as at present, battle ports are closed day and night. Thermotanks should be adjusted to heat living rooms to 55° or 60 F., and if, by reason of occupation or personal idiosyncrasy, a higher temperature is needed the warmth should be met with electric heaters able to furnish the slight added increment required. Experience on this vessel has shown the superiority of bitumastic over Portland cement as lining material for fresh water tanks. Drinking fountains should be installed for firerooms and engine rooms. Salt-water showers for the crew should be discontinued. The hygroscopic action of the salt is disagreeable if not harmful. Clothing washed in salt water is hard

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rations location give up sterilizer part of to dry. Laundries for the crew are desirable, if they can be made to use fresh water economically. Electrical connections and supports for electric fans should be installed in turrets, handling rooms, and other compartments liable to the invasion of poisonous gases, so that when an action is imminent the fans may be rapidly set up with a view to keeping the air in motion, thus lessening the bad effects of impure air and preventing the concentration of gases. It is important at this time to pay special attention to the visual strength of lookouts and while in the war zone these men should wear orange

glass goggles and have very brief periods of duty. U. S. S. North Dakota.—The addition to the outfit of the new "cold" weather clothing" affords the men protection never enjoyed by them before and has much to do with the noticeable reduction in the number of colds and catarrhal conditions. So far we have had no pneumonias or pleurisies, which may or may not be due to the fact that the men on watch and in boats, in addition to wearing this heavier outer clothing can have their feet protected with the rubber overshoes supplied. It would appear that in the past we have not been dressing the men in a way to withstand the most rigorous winter weather. The older officers and men in the service seem to think that the regulation naval clothing is not up to past standards of texture and quality, owing, doubtless, to the inability of manufacturers to meet the sudden increased demands. The battle dressing stations have been fitted with economical hot-water heaters, which have been arranged by the engineer to supply hot and cold water.

 $\widetilde{U}.\,S.\,S.\,Oklahoma.$ —The battle dressing stations of this vessel have been improved by the following additional equipment: An additional fresh water tank of 100-gallon capacity installed at each battle dressing station; likewise electric instrument and dressing sterilizers, the steam pipes and lavatory bowls at each dressing station being protected by wire netting when not in use. An ample supply of all surgical dressings and other necessaries are kept in the storeroom adjacent to each battle dressing station. The general health of the crew has been very good, considering the shifting personnel of immature recruits coming aboard from training stations and later on being transferred elsewhere to make way for new drafts in need of training. There were no serious epidemics until near the close of the year, when mumps were introduced aboard from Newport. There were four cases of cerebro-spinal meningitis during the year, 123 cases of

mumps, 78 of measles.

U. S. S. Ozark.—On arriving at Tampico, Mexico, June 25, 1917, every precaution was taken to protect the crew from malaria, which is so widely prevalent and has such a high mortality at that place. The ship was screened as thoroughly as possible. The men were provided with mosquito netting for their berths and head nets and leggings were used by all on duty on deck after sundown. Daily at

morning quarters quinine was administered to all hands.

U. S. S. Pennsylvania.—One of the lessons learned from the preparations made aboard this ship for war service was in regard to the location of the operating room. It is necessary on our battleships to give up the operating room in anticipation of action, removing the sterilizers, etc. In future ship construction it would seem to be the part of wisdom to locate the operating room at the site of the for-

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m white}$ and mediwork, when, otanks l if, by erature able to this vesement as hould be wers for f the salt er is hard ward dressing station so that its installation may be permanent for every contingency. The present operating room could be used as a dressing room for minor injuries and for minor surgical operations. At present the dressings are done in the sick-bay, much to everyone's

inconvenience.

U. S. S. Salem.—Attention is called to the benefit that would be derived from the installation on board Navy vessels of a drying room with high temperature, so that when clothing is washed in bad weather it could be thoroughly dried. Such provision would increase the frequency with which men wash their clothes and make for cleanliness and health. Men are often drenched to the skin when doing deck duty under way, when out in boats, repairing targets, etc., and have no means of thoroughly drying their clothes unless clotheslines can be rigged and the sun is shining. Clothing and bedding lashed up for the day in a canvas hammock are practically in an imprevious closed bag which retains emanations from the body in sweat and moisture.

U.S. S. Von Steuben.—The general health of the ship's complement has been very good. The special winter outfits now furnished to men exposed on deck during inclement weather have filled a long-felt need. There has been some complaint from the crew in regard to the durability of the blue uniforms and the quality of the dyes employed,

defects which will undoubtedly be remedied.

U. S. S. Wyoming.—It is recommended that ships now building be equipped with metal first-aid lockers at each gun and that the present first-aid canvas bags be done away with. It is impossible to keep these canvas bags clean or their contents sterile for any length of time. Metal lockers can be cheaply installed and could be secured with some type of lead seal which would prevent tampering with

their contents.

Lieutenant Commander F. E. Sellers, Medical Corps, United States Navy, comments unfavorably on the ventilation of the coal-burning destroyers which is largely dependent on natural causes. The defective ventilation becomes particularly noticeable when a destroyer is subject to prolonged periods of bad weather, with consequent closing of hatches for days at a time, as is common where our destroyers are operating abroad. Men of years of service are made seasick for the first time by the foul air, and many in the engine room prefer to stay there after coming off watch because of the stuffiness of the living spaces assigned them. On the U. S. S. Jervis the ventilation aft, when underway with everything closed, is defective and reduces the activity and efficiency of the crew.

Battleship Force No. 1.—Special effort has been made in this division of the fleet to standardize the medical preparations for battle. In the past, owing to variation of structure in the several ships and to the different views entertained by individual medical officers, there has been some lack of uniformity in this respect. The advantages of uniformity are the ease with which men transferred from one ship to another can promptly take up their duties and the possibility of determining at inspection whether the preparations of a given vessel are up to the standard. The making of requisitions for stores, the installation of special devices, minor changes of structure are all simplified by such uniformity. The location and equipment of each

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dressing station with the number and rating of officers and men assigned to them and their specific duties are given in detail in the order of the force commander. To the chaplain is assigned the duty of supervising the clerical work. This includes the tagging of each patient and the retention of a copy of the tag, giving name, rate, religion, diagnosis, and treatment. The dental surgeon is the anesthetist. Minute instructions are given in regard to dismantling sick bay and operating room, the rigging of the dressing stations, the care of microscopes and other costly and valuable articles; the location of reserve stocks of dressings; the transportation of the injured; the handling of fire hose, gas masks, ventilators, etc. Provision is made for installing portable fans, for the subsidiary lighting of compartments, and for the handling of sick and wounded at "abandon ship."

An order has recently been promulgated by the force commander relative to general sanitary measures. It calls for a daily sanitary inspection of each ship; for special care in regulating the ventilation, heat, and humidity of living spaces, and in ordering uniform of the day that it may be strictly suitable to weather conditions; for reduction of overcrowding in particular compartments. measures are ordered to prevent spitting on deck; to insure sufficient spitkids in every compartment and have them cleaned daily. rections are given for the sanitary preparation and serving of food; scuttle butt terminals are to have an inclination of 10 to 15° and to be flamed daily; dishcloths are to be boiled after use; swabs are to be exposed to sun and air daily or to be chemically disinfected. In all sick bays Chapin's aseptic technique is to be followed. The following health measures are emphasized: Daily bath; washing of hands after voiding bladder or bowels; use of one's own towel and toilet articles only; avoidance of exposure to droplet infection.

CRUISER AND TRANSPORT FORCE, U. S. ATLANTIC FLEET.

The Cruiser and Transport Force, United States Atlantic Fleet, had its beginning in the present war in the First Expeditionary Force, which sailed and arrived in France in June, 1917, in four groups, composed of the Seattle, St. Louis, Charleston, Birmingham, and De Kalb, two Navy troop transports (for marines), the Henderson and Hancock, and 14 Army transports with fuel ships, destroyers, and yachts. Troops of the Army and Marine Corps to the number of 12,261 were taken overseas on this expedition.

The cruisers escort the greater portion of all troops leaving America from ports of embarkation besides great numbers of cargo convoys; somewhat less than 50 per cent of American troops have been

carried in naval troop transports of this force.

The commander of the Cruiser and Transport Force did not have charge of the conversion of merchant liners to troop transports, with the result that during the early months adequate and appropriate space was not allotted to the medical department on certain ships. For the same reason arrangements and installations for troop hygiene and sanitation were found to be inadequate. Criticism, based upon experience in actual service, has resulted in the correction of many defects whenever the vessels were available for alteration

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without delaying sailing dates or at the same time that repairs essential to buoyancy and propulsion were undertaken. Naval constructors have been responsive to needs indicated by the medical department. The result has been exceptional facilities for the care of the sick and generous consideration of the dictates of sanitation in recent revision of specifications for conversion of merchant vessels to naval troop transports.

This does not mean that all ships of the force yet have wholly adequate or the most appropriate installations for air, water, food, disinfection, etc., but that the principles and desiderata are fully recognized and will be accomplished as speedily as military exi-

gencies of troop transportation permit.

During the early summer emergency troops have been transported in excess of comfort and convenience, but without serious disregard for sanitation. In almost every instance the troops have loyally appreciated the facts of war and cheerfully accepted the inconveniences, the majority of which are imposed by considerations of safety for the ship. Their health seems to have been quite as good on naval

transports as in training camps.

The general principles involving the relation between the naval medical department of ships and Army personnel embarked were well embodied in "Regulations for Internal Administration of United States Naval Transports," dated September 15, 1917. The details vary as widely as do the Leviathan and Lenape, and are worked out by experience gained during the first trips by personnel on board with the advice of the force medical officer. Medical officers of newly commissioned transports derive great assistance from personal visits to active transports while they are in port. It has been quite impracticable to standardize details on converted ships, but standardization will be applied to ships now building. The Army medical department was requested to prepare a booklet containing the main features of the duty of Army medical personnel embarked for passage, and this will soon be issued at the port of embarkation. The use of this booklet at camps should prepare newly commissioned Army medical officers for their duties on board ship.

The naval medical department on board naval transports virtually operates as a hospital to which Army medical officers, holding sick call in various compartments occupied by their units, transfer, through the Army medical officer of the day, such sick as require bed treatment. While the senior naval medical officer has full responsibility for sanitation and care of the sick, he must depend upon Army medical officers for assistance in the sanitary inspections and enforcement of hygiene in their compartments, latrines, mess halls,

etc. Such assistance has rarely been wanting.

There are few problems arising in transports which do not have some relation to sanitation; so that commanding and executive officers and first lieutenants constantly consult medical officers. The force has been fortunate in having medical officers competent to furnish valued suggestions. Many junior medical officers are qualifying themselves to justify their nomination for senior surgeons as the transport force expands. In this matter of training medical personnel the transport force tends to become self sustaining. Through the assistance of the Mayor's Committee on National Defense over twenty

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of the municipal and private hospitals of New York City extended to naval medical officers the privileges of attendance and actual participation in their clinics beginning March, 1918. Comparatively little time is available for study at these hospitals, yet they have been of considerable assistance in familiarizing certain newly appointed officers with the best accepted technique in the laboratory, in medicine, surgery and sanitation. A considerable number of medical and dental officers of the Reserve Force and former National Naval Volunteers have served on cruisers and transports and, with few exceptions, rendered creditable service.

The force sustained a most regrettable loss in the death of Surgeon Lindsay Cochrane Whiteside, United States Navy, on the occasion of the sinking of the *President Lincoln*, immediately after he had superintended embarking all the sick in boats and the hospital corps on rafts.

Of the 43 transports, 22 have dental surgeons permanently assigned and there are 8 in the cruiser force. Besides these there are two dental officers, detailed to the offices of the force commander, who are constantly making voyages with their portable outfits in the smaller transports and cruisers which have no regularly assigned dentist.

The wisdom of detailing a pharmacist to each transport to relieve medical officers of responsibility in routine clerical work and hospital corps details is apparent to all concerned.

Like other branches of the service, men of the hospital corps have received much practical, systematic training on board; this first-hand training and didactic instruction has been valuably and most generously supplemented by practical work in the various civil hospitals of New York City, the arrangements for which have been constantly handled by Dr. J. G. Young, assistant to Lieut. Commander W. S. Bainbridge, Medical Corps, United States Naval Reserve Force. The idea of receiving training during the few days in home ports was originally suggested by Lieutenant Commander M. B. Miller, Medical Corps, United States Naval Reserve Force. Similar facilities are offered in Philadelphia and at Hampton Roads, and hospital corpsmen receive instruction between trips through facilities under the control of the medical aid to the commandant of the district. The courses offered in New York City comprise:

General nursing.
Operating room work.
Laboratory.
X-ray.
Embalming.

Dispensary.
Carrel-Dakin technique.
Anesthesia.
Dietetics.
Genito-urinary.

Medical stores are issued direct to transports and cruisers upon requisition to the Naval Medical Supply Depot, Brooklyn, without reference to the bureau or the force medical officer. Acknowledgment is due the supply depot for prompt and complete deliveries in view of market and transportation conditions. Occasionally a few hospital stores and comforts have been accepted, because generously offered, from philanthropic organizations, but seldom if ever has there been acute need for them.

The installations on transports which are unusual in the medical departments of naval vessels, include disinfecting rooms, large steam

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autoclaves, sanitary cans for troop spaces, folding pipe standees with canvas or woven steel bunk bottoms, electric throat spray pumps, compartment disinfectant spray pumps, diet kitchens, embalming outfits, three distinct isolation wards for different contagious diseases and special spaces for Army sick call. After extended consultation and correspondence with transports the bureau decided that the infrequent need of X-ray outfits hardly justified the expense, difficulties of operation and interference with other electrical fixtures and the utilization of space more needed for other purposes, incident to the installation of X-ray machines.

Troop transport sanitation has involved study and effort quite beyond experience in previous wars, due to the utilization of all available steamships of many kinds and the crowding to the utmost limit compatible with safety to life during the one to two weeks' passage.

Pneumonia and other communicable diseases originating in camps became so noticeable during the early winter that the force medical officer was directed to take passage on the *President Grant* and later on the *Covington* for the purpose of intimate observation and study of troop-ship sanitation. The immediate result was a first-hand understanding of naval and Army interrelations and the adoption by the War Department of the principle of advance Army sanitary details, boarding, and learning their duties prior to general troop embarkation.

Aside from his other general duties as aide in policies and corembarkation. respondence, the most important function of the force medical officer has latterly consisted in frequent ship inspections and dissemination, from one ship to another, at the principal port of embarkation, of valuable information gained. He rarely fails to gain some suggestion of probable use to others from an inspection or conference with the medical officers who work out their own solutions of the new problems frequently arising. As a member of the board for increasing troop carrying capacity he finds it difficult to compromise between military exigency and the accepted dictates of hygiene and sanitation, usually reluctantly waiving the latter for the former. Almost invariable cooperation between Army and Navy medical officers has rendered this policy a safe venture. An additional medical officer with transport experience is detailed for inspection of ships at a southern port of embarkation.

In December the equipping of each fireroom, engine, dynamo, and auxiliary room of transports and cruisers with portable sanitary scuttle butts was recommended. They have also been authorized for the battleship forces and, if furnished, should diminish the recently higher prevalence of communicable diseases in the engineer's force.

The Navy Department, early in the year, tendered the use of its transports on return voyages to the War Department for returning Army sick and disabled up to maximum allotted capacity, in excess of Navy needs, for the various classes of sick, including totally bedridden, ambulatory surgical, tuberculous, insane, and convalescent patients with the proviso that the Army should furnish, when requested, any additional personnel required for the return in comfort and safety of large numbers of sick. This was done with the distinct understanding that the Navy assumed no responsibility for returning all the disabled. The department also expressed its readiness to man

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and operate any equipped hospital or ambulance ships which the War Department might provide. Gradually increasing numbers of disabled men are being returned to home ports with all the satisfaction that could be reasonably expected. The practice has amply justified the use of our limited accommodations for the sick and continually gives rise to new, important, and interesting problems.

Under agreement with the War Department the remains of all troops dying on board transports are embalmed and incased by trained naval hospital corpsmen under supervision of a naval surgeon for return to home port. The Navy deceased are likewise cared for on transports and on cruisers wherever caskets can be carried,

improvised, or obtained.

While the Navy has held to the only logical and tenable principle that if the Army will embark clean, whether in home ports or overseas, the Navy will transport free from infection, naval surgeons have undertaken to limit by isolation or to eradicate by disinfection such contagions as may unavoidably escape detection through necessarily hurried embarkation. For example, there is imminent danger of bringing home both typhus and trench fever, transmitted by body lice, unless effective delousing is accomplished before embarking passengers and disabled men in overseas ports. In all probability additional delousing will frequently be required on board and after landing at home ports. In this the Navy stands ready to do its full share within the limits imposed by conditions on shipboard. Ships crews are given toxin-antitoxin immunization against diphtheria as shown to be required by the Schick test and cultures are taken when required to determine the presence of carriers of cerebrospinal meningitis and diphtheria. Fortunately thus far there have been few cases of meningitis and relatively few of diphtheria considering the widespread epidemic in New York last winter and spring, and there has been no occasion for searching for typhoid carriers.

Posters and booklets on the avoidance of communicable diseases devised by Lieutenant Commander W. D. Owens, Medical Corps, United States Navy, besides those furnished with bulletin boards, lantern slides, and films for sex hygiene propaganda by the Social Hygiene Instruction Division of the Commission on Training Camp Activities are extensively used by naval surgeons in their lectures to crews to limit venereal diseases and the disability resulting therefrom.

The medical department of this force has received material assistance from the sanitary adviser (Public Health Service) to the medical aide to the commandant of the third and fifth naval districts and most valuable suggestions and information from Army officials with whom they have been associated. Relations with Colonel J. M. Kennedy, Medical Corps, United States Army, chief surgeon, port of embarkation, and his staff of able assistants have given both pleasuse and profit to naval medical officers at this port.

The bureau has been in close touch with the work of Captain C. N. Fiske, Medical Corps, United States Navy, and of his assistant, Commander J. J. Snyder, Medical Corps, United States Navy, and rec-

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ognizes to the full the value of their able and devoted service in con-

nection with the cruiser and transport force.

U. S. S. President Grant.—The officers and crew number 662. The designated transport capacity is regarded by the senior medical officer as too large by 1,500. The percentage of sick for the year was: Navy personnel, 0.002; Army passengers, 0.00725. On the first voyage 30 cases of measles developed. On the second voyage there were 58 cases of lobar pneumonia, with a mortality of 12.06 per cent. Forty-four cases were among negroes destined for a stevedore regiment.

U. S. S. President Lincoln.—Naval complement was 583 on an average. In the course of two voyages on which many thousands of men were transported, 35 cases of pneumonia were treated without a death. A gas chamber has been placed aboard for wholesale disinfection of mattresses and clothing. Special arrangements were made for the fresh air treatment of pulmonary cases. Posters and booklets on personal hygiene, gotten up by the senior medical officer of this ship, Lieutenant Commander W. D. Owens, Med. Corps, United States Navy, have been used on all vessels of the Transport and Cruiser Force.

U. S. S. Leviathan.—Venereal disease furnishes the sore spot in our statistical reports, and it is not due to the service or the innate depravity of the sailorman, setting him apart from his fellowmen. The training of our young men in social prophylaxis should not be left until they enter the naval service, and then thrust upon the medical officer. It should begin when they reach the age of puberty, or even earlier, and the dangers of venereal disease should be put vividly

before them.

While he is at home in a small town or village or on the farm, public opinion generally sets the pace and a certain amount of restraint is exercised but, when the young man goes from the above restraints into the great world, and is surrounded by temptations which he only knows by hearsay, the wonder is, not that he falls, but that he falls so seldom.

The parable of the sower aptly applies to lectures on sexual hygiene, social or venereal prophylaxis. The seed must be planted

before the soil becomes barren and stony.

HOSPITAL AND AMBULANCE SHIPS.

Vessels of this type must be prepared and held ready in advance of the acute situations which make them necessary, because these exigencies usually sweep aside the claims of everything not bearing directly upon the immediate destruction of the enemy. At the commencement of hostilities the Navy possessed one hospital ship, the Solace, a vessel which has been in use in one capacity or another for 20 years and still renders good but limited service. The bureau's repeated efforts to secure hospital ships in number and construction on a par with the needs of a growing fleet finally lead to a ship being laid down in Philadelphia which had been conceived and designed on the most elaborate scale. When war began work on this ship was naturally discontinued, as she was not considered sufficiently far along to be available within any reasonable time. Two ships, the Saratoga and Havana of the Ward Line, were assigned as ambulance ships,

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but more pressing work took precedence of their conversion and months passed before anything was accomplished on them. Finally on March 28 and January 24, 1918, they were commissioned as the Mercy and Comfort, respectively, and became available for the medical department. Each is of 10,000 tons burden, has a capacity of about 300 patients, and is admirably equipped for the work intended. If they could make two round trips a month they could bring home from abroad 1,200 sick or wounded in that period, but such expedition in loading and unloading is not to be expected. Their combined capacity could not well exceed an average of 600 to 900 a month. It was, therefore, with surprise that, while struggling to get these vessels ready for its own use, the bureau learned that the medical department of the Army was relying on Navy hospital ships to return the sick and wounded from overseas at an anticipated average of 5,000 per month. Cordial and sincere assurances of the utmost willingness to help were given, but, while every available bunk and the services of every doctor and sick attendant in excess of the Navy's own needs were put at the disposition of Army authorities, it needed only a brief representation of the Navy's resources in hospital ships to make it clear that these ships could not be depended on to do more than supplement the Army's own provisions. After conference and correspondence it was decided to utilize returning troop transports for bringing home at each voyage so many of the Army's sick and wounded as could receive adequate supervision and care.

A transport's capacity for troops going to the front is in no sense an idex of its availability for caring for returning sick and wounded and depends less on tonnage and speed than on actual facilities for berthing, guarding, confining, isloating, nursing, bathing, and feeding various types of patients—tubercular, insane, contagious, bedridden and helpless. Details of the ship's structure count more than the number of attendants when it comes to accessibility of toilets, disinfection, preparation of dressings, serving of food, etc. A soldier going to the front can stand a good deal during a 10-day voyage that can not be inflicted on a sick man whom it is proposed to win back to health. For the soldier to go up two or three decks for air and food, for him to walk 75 yards forward or aft to a toilet is nothing. A man on crutches would find these conditions prohibitive in the

calmest weather.

An estimate of the help which could be rendered, based on a study of these considerations, was made and plans were elaborated for the conduct of affairs. Of the present fleet of vessels under Navy control the combined capacity on a single voyage for returning sick would be in round numbers as follows:

Total bedridden sick, in sick-bay bunks, requiring a maximum of attention	1, 400
Total of patients requiring surgical dressings, to be accommodated in troop standees	7, 800
Insane	600
Tuberculosis patients in isolation or on open decks	975
Patients requiring no attention and in officers' quarters	4,900
Convalescents having practically the status of well men so far as berth-	,
ing, etc., is concerned	76,000
Total	91, 675

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The actual individual capacity for carrying sick varies with the ship. The commanding officer determines it on the advice of the naval surgeon attached thereto. By judicious distribution of patients to the different ports at which fresh troops disembark congestion can be avoided and a constant flow homeward maintained. It should never happen that a ship of even small capacity returns empty and yet many of the transports, among them the largest vessel afloat, have so returned, while ships at other ports were filled to capacity and evacuation officers might have yielded to the temptation to overcrowd but for the wise arrangement that left the determination of the number of patients to the seagoing officers. By way of aiding further in this work two medical officers of experience have been detailed to permanent duty along this line in ports of embarkation of sick, because the task of evacuation must inevitably become heavier as our part in the war increases. The service of distribution must be simplified and accelerated and this can only be done by having prompt notice of ships due in the various ports and advance knowledge of their capacity, so as to utilize it to the full.

Medical officers of the Navy serving on transports have been directed to exercise extreme caution when insane patients, whether officers or enlisted men, are committed to their care while in passage to the United States. It will usually be impossible, on so long a voyage, because of their limited number, to count on the services of hospital corpsmen for the safekeeping of patients of this class. Application should be made to the commanding officer of the ship to provide a military guard, standing watch constantly to prevent any lamentable accident. These men and all hospital corpsmen should be told in the most explicit manner what to do and have

additional written instructions from the medical officer.

When transports or other vessels require water from ashore for drinking purposes it is chlorinated. Several conferences have been held between bureau officials and the manufacturers of the plants required for the quick and economic chlorination of water, and one of the large transports has been equipped with the necessary device.

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Experiments are under way to determine its efficiency.

The messing arrangements for troops are among the most important and difficult features of transportation on account of the limited spaces and the large number of men to be served. On the U. S. S. ——, whose crew is 500 odd officers and men, and whose accommodations for troops is 2,570 officers and men, the following

working plan has been adopted:

The men line up in 8 columns and file past 8 rows of food containers, where the different articles of food are served by special mess men. By this method 100 men per minute are served. There is no space for tables, and the men pass on and find places to eat on deck. When the men have finished eating they re-form on the covered well deck, scrape their plates into a line of garbage cans and enter the scullery 10 at a time. Here are located 20 tubs, each supplied with a steam pipe and hot fresh and salt water, to permit washing and rinsing. Thirty men a minute can pass through the scullery.

The U. S. S. Solace has been frequently described in previous reports and needs no further reference here. The two vessels assigned to the medical department and converted since war was de-

clared into hospital ships called, respectively, the Mercy and the Comfort, were formerly in the service of the Ward Line. Each is of 10,000 tons displacement, is 430 feet long, and has approximately the following complement: Medical officers, pay officer, chaplain, 20; officers and crew of the ship (navigation, engineering, etc.), 275; hospital corpsmen, 100. As they resemble each other in all but minor details, a description of one serves for both. In adapting these ships to medical purposes the endeavor has been to place the wards for the more serious cases, the operating rooms, laboratories, etc., on the upper decks to obtain a maximum of natural light and The lower decks have been utilized for the rooms and wards intended for convalescents and patients in transit. Accordingly, on the upper or promenade deck, going from forward aft, are the operating suite, the ward for sick officers, rooms for convalescent officers, and wards for the isolation of contagious cases. On the deck below, the surgical ward is situated directly under the operating suite and connected with it by an elevator. Next come the dental office, a dressing room, diet kitchen, dispensary, X-ray room, laboratory, medical ward, and all the necessary appurtenances belonging to them. These two decks are above the hull and have through and through ventilation and an abundance of light by very large portholes. On the main deck are located the prophylactic room, the X-ray developing and study room, the operating room for eye, ear, nose, and throat cases with its ward; a genito-urinary operating room and ward and a large ward for convalescents. The rest of the ship is taken up with quarters for the officers, crew, and hospital corps, and with storerooms and machinery.

The operating suite consists of a general operating room, sterilizing room, instrument room, anesthetizing room, scrub-up room, and pus operating room. The general operating room contains two operating tables, each having its own accessories, such as instrument tables, dressing sterilizers, instrument cabinets, immersion bowls, stools, etc. The decks are tiled and the bulkheads are sheathed with galvanized iron coated with white enamel paint. The natural light in the operating room is good, but a fine set of electric lights is installed over each operating table and at various places along the bulkheads. The pus operating room is similar in equipment and finish. The only difference between these operating rooms and those found ashore lies in the necessity of securing everything immovably to the deck. The instrument room is provided with a complete assortment of surgical instruments of every type and with appropriate cabinets for storing them when the ship is underway. The surgical ward below the operating room has space for 54 bunks, arranged in two tiers, and can at a pinch accommodate an even larger number of patients. The bunks are of tubular iron with wire woven springs and many of them are fitted with the Goetz adjustable springs for placing patients in the Fowler position. Attached to this ward are water-closets and bathrooms. Just abaft the ward is the surgical dressing room with a complete equipment of tables, sterilizers, instrument cabinets, irrigators, and bowls with running hot and cold water, etc. The provisions described above, together with the genitourinary operating room and an additional table in the main operating room, make it possible for 6 operating teams to work simul-

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taneously should emergency make it necessary. For purposes of administration the X-ray department, the eye, ear, nose and throat department, and the genito-urinary department are under the general supervision of the surgical department. The wards and special rooms for sick officers connect with a mess room, and a dumb waiter runs from it to the galley. Aft of the sick officers' mess room is the linen room. Between this point and the stern of the ship are located 5 contagious wards, with a total of 44 bunks, and available space for additional bunks in an emergency. The wards are operated separately and each has its own bathroom and toilet facilities. Food is distributed from a common pantry direct to each of these wards, the mess gear being thoroughly disinfected after use. The contagious suite includes a room where convalescents from contagious disease receive their final bath and put on clean clothes before being discharged from quarantine. The last inclosed space on this deck is a solarium available as an extension of the contagious department.

Aft of the surgical ward are the administration offices, pay office, and the office of the dental surgeon. The medical ward for purely medical patients confined to bed contains 36 bunks and is outfitted in every way like the medical ward of a hospital ashore. The genitourinary and convalescent wards contain 136 bunks, which number

can be increased at need to 200.

Each ship is equipped with a cold-storage plant holding fresh provisions for three months or more. The refrigerating machine will produce, under favorable circumstances, a ton of ice or more a day. The distilling plant, consisting of evaporators and distillers, has an output of about 20,000 gallons of fresh water per day. The galley or kitchen and the commissary department are under the direct management of the paymaster of the ship and can provide foods of any kind, except the special diets, for 600 people. The ship's laundry, on the main deck, is equipped with the most modern type of electrical machinery. The most valuable adjunct in the treatment and feeding of the sick is the milk emulsifier, popularly known as the "mechanical cow." The milk produced by this machine is made from a combination of unsalted butter and skimmed milk powder and can be made with any proportion of butter fat and proteins desired. This machine will produce 15 gallons of cold, pasteurized milk in 45 minutes. The electric ice-cream machine, controlled by one man, makes 10 gallons at a time and is supplemented by small freezers for preparing individual diets for the sick.

In addition to the provisions enumerated may be mentioned the carpenter shop, machine shop, electric shop, the storerooms for dry provisions and for medical and surgical supplies, the disinfecting plant, and apparatus for various forms of electric treatment and tr

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For the amusement and recreation of the sick and the convalescent the Government has provided a good fiction library, while various patriotic and benevolent societies and individuals have contributed such valuable accessories as a moving-picture machine, a pianola, various games, subscriptions to current magazines and papers. The ship's chaplain, in addition to his strictly religious duties, has charge of amusements and entertainments. Each ship has a total patient capacity under ordinary conditions of 350.

Hospital Ship No. 1 was laid down at the Philadelphia Navv Yard in 1916 but work on it was practically discontinued at the outbreak of war. It is hoped that during the course of 1919 this much needed vessel, the first to be planned and built in the United States Navy expressly for hospital purposes, will be available for service.

There remains unfilled at present a real need for a few small ambulance vessels suitable for cruising in the harbor of New York or the lower waters of Chesapeake Bay to visit patrol boats, removing from them sick or injured men and taking them to hospital, or renewing their medical stores and furnishing transportation to a doctor to inspect or treat the personnel. Small vessels of this type would enable a medical officer to board ships of the Naval Overseas Transportation Service on their coming to anchor and to remove with dispatch patients needing hospital care.

U. S. PACIFIC FLEET.

On January 1, 1917, the organization of the fleet comprised an active force, a reserve force, and a coast torpedo and submarine force. When on January 13 the U. S. S. Milwaukee went ashore and became a total loss, the crew was gotten ashore by means of boatswain's chairs and breeches buoys, many being subjected to severe exposure in the operation for which some needed hospital treatment. The crew was quartered in a lumber camp for several days after the accident, and here also they suffered some exposure, but, in spite of all this, the general health was good.

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German measles, measles and mumps had been epidemic among the civilian population all along the Pacific Coast. The recruiting of such enormous numbers as mobilization required naturally brought all these diseases to the concentration points in great abundance. There was neither time nor opportunity for the efficient segregation or isolation of individuals at the training station. The ships must have the men and quite naturally these contagious diseases broke out on shipboard, later in epidemic form. The Frederick, with drafts for the Pueblo and St. Louis carried some 1,500 men from the naval training station at San Francisco to Cerros Island, Mexico, where she delivered her drafts already full of measles.

During the time spent at sea by the cruising squadron the medical officers of the several ships inspected the personnel recently received on board, corrected health records, and gave necessary cowpox and typhoid vaccinations, so that when the squadron arrived at Panama all were properly protected.

The squadron arrived at Bahia, Brazil, on June 14 and was granted pratique. The health of this port was declared good by the local authorities but investigation brought out the fact that plague was epidemic and that cases were appearing constantly in different parts of the city. There were isolated cases of smallpox and of a severe and fatal type of malaria. The American consul stated that venereal diseases were very virulent and advised against general liberty for the men, both on account of health conditions and of the possibility of disturbances because of the large number of Germans from interned ships who were working in the cafés likely to be visited by the enlisted men.

At Montevideo the British hospital was the one mainly used by our squadron, and the Chief Surgeon, Dr. Garcia Lagos, a physician

of wide reputation, devoted his best efforts to our men.

One patient with spleno-medullary leukemia was sent to the Maciel Hospital to have the benefit of X-rays which was the only treatment offering the least hope. The case was one of most aggravated type and the patient died in less than a month after entering the hospital. The members of the medical fraternity of Montevideo were most courteous to our medical officers and arranged visits of inspection to all the important hospitals and medical schools, etc., of

On the way to Buenos Aires, a sad accident occurred on the Pittsburgh. The saluting guns had been removed from these ships and 3-inch guns were used with reduced charges made up on board. In reloading 3-inch cartridges with saluting charges, the used percussion primer is punched out from the base with a special tool. By accident a loaded cartridge got mixed up with the empties and in attempting to drive out the primer the loaded cartridge exploded, shattering the skull of one man who died 40 minutes later. Another man sustained compound comminuted fractures of right leg and left wrist, with extensive destruction of bone and soft parts. This man was sent to the British hospital at Buenos Aires, where he was placed under the care of Dr. J. O'Connor, who writes that the patient is improving, and that the bone in the leg is slowly reforming.

All the ships in this squadron were, more or less, infected with German measles, the source being primarily the general infection of the civilian population on the entire west coast. The number of cases on the Pueblo amounted to about 10 per cent of the crew. This high incidence may have been because the disease is relatively rare among the exanthemata, and consequently there are fewer immunes. There were practically no serious complications or sequelae and the epi-

demic was over after about two and one-half months.

All ships were infected with mumps and the Pittsburgh still has the disease. Every conceivable precaution has been taken but the

Two cases of scarlet fever occurred, one on the Pittsburgh, the disease still persists. other on the Pueblo in Montevideo. Both were contracted ashore, but efficient care has prevented the spread of the disease. Two cases of cerebro-spinal meningitis have come to the fleet surgeon's notice. One fatal case developed on the Huntington in May, a second on

the Pueblo early in September. Venereal diseases have given much trouble, gonorrhea, chancroid, and syphilis being very prevalent. Chancroid infection has been particularly virulent, the majority of cases showing phagedenic characteristics and resisting treatment. Repeated talks on sex hygiene and venereal prophylaxis, etc., have been given to the men of the squadron, but apparently this has availed little. More strenuous methods are needed to prevent the great loss of efficiency due to venereal disease. The squadron has had about 4,000 sick days on account of this trouble.

With the exception of the epidemic of measles, which lasted about year, ye two months, and the venereal troubles, the general health of the squadron has been excellent. The naval reserves and volunteers very year, 2,

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soon began to show the healthful influence of ship routine and proper care. The fine appearance of our men has often been remarked on

by strangers on shore.

The cruising has been almost entirely in semitropical and tropical waters, so the regular issue of clothing has answered every purpose. Recent shipments from the supply officers at home have included the winter clothing adopted by the Navy Department. Wool sweaters, mufflers, and wristers have been received as gifts, and have been distributed to officers and men.

It has been the aim of all to make this squadron self supporting in all respects, therefore with the splendidly equipped operating rooms on these armored cruisers every bit of surgery possible has been done on board. Only in cases where hospital treatment was absolutely imperative have patients been sent to civilian hospitals here. Only nine such cases occurred while the fleet was in South

America.

The fleet surgeon has inspected in detail the medical departments and general sanitary conditions of the several units. In every case the departments have been found efficient and well organized, showing the zeal and devotion to duty of our medical officers and hospital corpsmen.

The dental surgeon on board the flagship has had plenty of work to do with a clientèle of over 3,000 persons. The office is well equipped in all respects. While the armored cruisers were with us an attempt was made to systematize the dental work of the squadron, each ship being assigned certain days and hours when appointments

could be made and dental work done.

U. S. S. San Diego .- A suggestion well worth considering and one which has often been heard aboard ship in recent years is to the effect that much saving could be effected, both for the Government and for the individual members of the numerous officers' messes aboard ship, if these were consolidated under a single commissary management. Under the present system the Government pays for a cabin steward, a ward-room steward, a junior officers' steward, and a warrant officers' steward on all of the larger ships. go ashore separately and make individual purchases for their respective messes, which vary in number from one (the captain's mess) to 20 or more officers, as in the case of the ward-room mess. Better prices and better supplies could be obtained and the work of bringing their purchases off to the ship could be reduced if one man did the buying for all. By giving him the pay of a warrant officer a good man could be secured for the position of officers' commissary steward, and the expense to the Government would still be less than under the present system.

U. S. ASIATIC FLEET.

It does not appear that the health of the personnel of the Asiatic Station for the year 1917 has been satisfactory. The complement of the station is about 10 per cent less than it was during the previous year, yet the deaths, primary admissions, and total sick days show an actual increase in numbers. There were 26 deaths against 25 last year, 2,685 primary admissions against 2,335, 48,485 total sick days against 42,611 for the previous year.

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Of the 26 deaths, 15, or more than one-half, were from external causes. Nine of the violent deaths were caused by explosive accidents on board the submarine boats. Eight lives were lost in the accident on board the A-7 and the accident on board the A-2 caused one death. These accidents occurred during ordinary surface runs and independent of diving evolutions. The boats were in the vicinity of the navy yard, Cavite, P. I. It is understood that the explosions were caused by defects which do not exist in boats of more recent design. There was one death from drowning by falling overboard while stepping from a sampan to the gangway. The ship was at the time moored in the Whangpoo River at Shanghai. The force and character of the current in this river are such that falling-overboard accidents are very likely to result in drowning. There were three deaths caused by fracture of the skull. In one the victim was knocked from the rail to the deck while coaling ship; one was an unwitnessed accident in the engine room of a torpedo boat; one was due to motorcycle speeding. One very unusual form of death was due to shark bite. The victim was swimming in rather deep water off the Cavite Yard when he was struck from below by a large shark. The bite scraped the backbone, completely eviscerating the abdominal contents. There was no further mutilation. There was one death by suicide from gunshot wound of the chest. All of these fatal accidents were, of course, carefully investigated and wherever possible safeguarding and precautionary measures against further danger

Of the 11 deaths from natural causes, two were from pneumonia and one each from abscess of the liver, epilepsy, cerebro-spinal fever, myocarditis, nephritis, scarlet faver, smallpox, and tuberculosis. Three of these diseases—scarlet fever, smallpox, and abscess of the liver—are among the dangers to which foreigners living in the

Orient are specially subjected.

The severity of the outbreak of smallpox at Shanghai during the winter of 1917-18 is shown by the statement of the American consul general that for 20 years the deaths among foreigners ranged from 0 to 21 in a year, while the deaths in 4 months of 1917-18 had reached 63.

There were five cases of smallpox on board the United States naval vessels at Shanghai, one of which was quickly fatal. Three of these cases were mild, the symptoms being modified by vaccination and one

was a case aborted by vaccination.

All of these cases were carefully investigated, particularly in regard to their vaccination records. The fatal case occurred in a hospital corpsman who had charge of his own health record. He stated to me during his illness that he had never been successfully vaccinated, though the vaccination sheet in his health record showed that he had been. Special pains should be taken in regard to the successful vaccination of hospital corpsmen in particular when circumstances are such that they have access to their own health records. During this outbreak it did not appear that any case was contracted from one of the others. Each infection was evidently acquired on shore and there was no spreading of the disease on board.

The aborted case of smallpox was the first case of this kind that the writer had ever seen. There was a history of ample exposure to the effect of

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a severe type of smallpox during the early eruptive stage, but before the disease had been diagnosed. Vaccination was given on the fourth day following this exposure. On the eleventh day violent initial symptoms of smallpox set in, except that there was no severe pain in the back. There was intense headache, attacks of vomiting, and a temperature between 102 and 103. Fortunately the vaccination showed unmistakable signs of taking. The symptoms subsided on the following day and the disease ran the course of ordinary vaccinia.

The medical officers of the fleet have been particularly active in endeavoring to reduce the amount of venereal disease. By means of lectures they have sought to instruct the enlisted personnel concerning the true nature of these disgusting infections. These talks have been free from any sensationalism that would tend to arouse morbid curiosity, such as gross exaggeration of the manifestations of these diseases, or the exhibition to them of disgusting and repulsive pictures. At opportune times the ships' companies have been circularized by warning leaflets and also leaflets containing matter that would appeal to their patriotism and better moral natures. As an instance of the latter kind the strong message of Lord Kitchener was printed and distributed throughout the fleet. The chaplain, working independently or with the medical officer of the ship when there was opportunity, has done much to support and diffuse the best teachings in these matters.

Without doubt these various measures for the suppression and control of diseases of this class have been productive of good. Of course one is not warranted in drawing general deductions from single incidents, but the following one is so striking that it seems worth mentioning here: During the past year one of the ships of the fleet visited a certain port for a period of one month and acquired 79 venereal infections; six months later the same ship visited the same port for the same period of time and with an increased complement, but on that occasion only 31 infections were acquired as against the 79 of the visit six months previous. It is difficult to think of any other factor than the above teachings as being responsible for this

marked change for the better.

Of course all of these dangers are intensified for the enlisted man of the Navy when he is ashore. There are many factors which close to him the avenues of entertainment which he is accustomed to find at home. In the first place public entertainments do not exist in the Orient, or, if so, only in a form which is of no interest to him. The language of the people is so strange that he can never hope to learn more than a word or two of it. There is no opportunity to make friends. When he has seen the strange people, streets, and customs he has practically exhausted all legitimate entertainment. He is not admitted to the local foreign clubs and he is never seen about the hotels of the better class. If he is tired from going about as a legitimate sight-seer and wishes to sit down for a rest there is no respectable place open to him. When he wishes to meet a friend by appointment, or to go in somewhere to warm himself, to avoid a passing shower, or for any other purpose, there is but one class of places open for him, and it goes without saying that he is found there.

his kind that the effect of such unfavorable environment should be reflected in the

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statistics of sickness from this station. Of course the frequenting of these places is against the better natures of most enlisted men, but it is to be expected that in the end the force of circumstances nearly always has its way. In order to do away with these injurious and corrupting circumstances and to supply the legitimate needs, in this respect, of the enlisted man while on shore the following plan has been suggested: As soon as the ship arrives in port and it is decided to grant liberty a waiting room is to be hired at some convenient locality on shore. The room should have a table, a sufficient number of chairs, and toilet facilities. There should be an enlisted man in charge with instructions as to his duties. No further expenses need be incurred. The object is merely to provide a place where the enlisted man may meet his friends by appointment, stop for a rest, write postal cards, leave packages to be called for later, get warm, wait for the boat hour, and have many other practically necessary conveniences. Under the stimulus of practical use this plan would probably become elaborated and adapted into something that would meet the enlisted man's various, legitimate needs. In the past these needs have been supplied by places with unsavory reputations or worse.

It appears to be the opinion of those who have had a tour of duty on this station that service conditions here are attended with a certain amount of mental and physical deterioration; that this deterioration may be recovered from if the period of service has not been too greatly prolonged, but that after a certain length of service in the Philippines the individual is unlikely to regain his normal

efficiency.

This opinion is believed to be substantially correct. Tropical conditions are not relieved but are aggravated in the life aboard ship. A person must have a young and vigorous constitution to successfully perform his duties aboard ship in Philippine waters and not show signs of lowered vitality if the period of service is too prolonged.

It is therefore recommended that under peace conditions 24 months' duty in these waters should count as a cruise; that those enlisted men whose enlistments expire out here should not have the privilege of reenlisting with the view of remaining on this station. They should be sent home at the termination of any enlistment which

has had as much as two years' duty on this station.

The duties of the medical officers of the Asiatic Fleet have been performed under widely varying conditions owing to the wide extent of the Asiatic Station. Under the command of the commander in chief ships have cruised as far north as Siberian waters and as far south as Australian waters. Also the gunboats of the Yangste have penetrated well into the interior of China. Naturally the effect of such wide geographical distribution is reflected in the statistical returns of diseases. The pneumonias and influenzas are from Vladivostok; the smallpox, scarlet fever, and diphtheria are from China; the malarias, dysentery, and other tropical diseases are from the Philippine Islands; and the measles and mumps are imported from the United States.

The work of the medical departments both on shore and afloat has been performed efficiently. Of course in reviewing the work for has of 1917 it is to be expected that individuals would have different opin In one ions as to which activities should be considered as having the highes ago an

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values for service efficiency. Personally, the fleet surgeon has been impressed by (a) the advanced character of the laboratory work done at the United States Naval Hospital, Canacao, P. I.; (b) the constructive work accomplished for the improvement of the health and living conditions of the native inhabitants of the Government reservation at the Naval Station, Olongapo, P. I.; (c) the successful efforts of the medical officers of the Yangste River gunboats in protecting the crews from the surrounding pestilence, and by their conduct under the attacks of Chinese revolutionists from ashore; and (d) the betterment in organization and new construction at the Naval Hospital, Yokohama, which broaden and increase the useful-

ness of that establishment.

U. S. S. Brooklyn.—During the course of military operations around Vladivostok, Siberia, offers of assistance in the care of the wounded were made to the commanding general of the Czech forces, through the American consul, by medical officers of the ship. On July 5, an engagement having taken place the previous day, 140 calamities from Vladivostok, 73 Czech and 4 Russian wounded were received for treatment. The Brooklyn at this time was moored with her stern to the dock. A storehouse on the dock, which had previously been used as an amusement hall for the crew, afforded a ready means of accommodating the wounded, a sufficient number of wards and blankets having been sent from the ship and the feeding being done from the ship's galley. The majority of the wounds were from rifle bullets, in some cases complicated by fracture of neighboring bone. All the wounds showing infection were treated with Dakin's solution. A few minor operations, such as the removal of superficially located bullets, the amputation of toes and fingers, were performed, and all did remarkably well. No death occurred among the wounded men received for treatment. One case of gunshot wound with fracture of the thigh was transferred to the Russian naval hospital on account of the impracticability of applying an extension while the patient was lying on a cot; 4 other cases were transferred to the Russian naval hospital. The enthusiasm and interest manifested by the officers and men of the Brooklyn in these wounded men were very touching. Money was promptly collected among the crew to supply them with tobacco and their clothes were portioned out and scrubbed by members of crew.

NAVAL HOSPITALS.

The professional work done at our naval hospitals has been excellent. In all of them unusual problems have developed in the organization and administration, through the very large increase in the number of patients and changes and increase in the professional staff. In some cases it has been necessary to improvise quarters for the admission of female patients consequent upon the employment of women, enlisted at navy yards and elsewhere for clerical duties. In most of the hospitals extensive repairs or new construction has been going on. Abroad, the establishment of our Navy base hospitals has often called for the display of much tact, patience, and ingenuity. In one case the best available building was a convent built centuries different operago and wholly lacking in the most essential sanitary provisions.

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In another case the selection of an appropriate site was rendered difficult through conflicting local needs. In Boston, Philadelphia, and New York the excess of patients has been temporarily divided among various city hospitals and the supervisory care of these patients, including the handling of their papers, the upkeep of medical records and case histories, their assignment to duty or other disposition, has devolved upon the commanding officer of the naval hospital. Systematic didactic instruction and practical illustration regarding military methods and routine has been given to a large number of medical men affiliated with the service. Many of them have been able to benefit by special lectures and clinical demonstrations which put them en rapport with the latest developments of medical and surgical treatment. On the strictly professional side also the work has been heavy. Epidemics of infectious and contagious diseases, pneumonia, tonsillitis, and empyema have called for the most approved modern treatment. Such treatment has been uniformly given with highly satisfactory results. Many carefully prepared reports of interesting cases or groups of cases have been sent to the bureau and been later communicated to the medical corps through the columns of the bureau's quarterly or weekly publications.

Early in the year it was arranged that Y. M. C. A. secretaries assigned to duty in connection with a specific training camp or ship should, when sick, have the benefit of medical treatment and hospital care with the status of officers and free of charge when they make

application for the privilege.

In order to facilitate the work of the Federal Board for Vocational Education in carrying out the act approved June 27, 1918, providing instruction and training for disabled men who require it, the commanding officer of each naval hospital has been directed to afford every opportunity for interviewing injured men to the persons designated by the board as advisers to naval hospitals. Each hospital will notify its properly accredited adviser well in advance of a survey for discharge of patients so that this official may have ample opportunity to inform himself of the disabilities, previous industrial training, and other pertinent facts relative to such patients. Specific instructions covering this matter and a statement as to the desire of the Major General Commandant, United States Marine Corps, to retain men who possess skill in certain trades, have been issued to all hospitals.

At some of our larger and more centrally situated hospitals the interests of the patients have been furthered by the utilization of trained social workers aiming to coordinate and use to the best advantage the help offered by patriotic members of the local community. The trained social service worker helps to regulate the contact between these outside agencies and the patients. It is important that the enthusiasm and sympathy of friends and well wishers of the Navy, eager to meet such special needs as are not within the province of Government agencies, shall not conflict with essential military provisions or requirements and that efforts to promote contentment and happiness shall be so distributed as to yield a maximum of benefit to all. Furthermore, the social service worker is often in a position to assist the patients in personal matters which do not come within the scope of surgeons and nurses and for which the proper

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prosecution of their professional duties affords them neither time nor

opportunity, however willing they may be.

The organization of the hospital service according to naval districts has worked satisfactorily. An extensive dispensary service utilizing in the main small rented buildings adjacent to the water front where patrol boats come in, containing a surgeon's office, quarters for the hospital corpsmen on duty, and a few beds for patients provides for the receipt and temporary shelter and care of the sick in the personnel of the patrol boats. The dispensaries are under the direction of the medical aid to the commandant of the district. Patients whose condition demands hospital treatment are transferred to the base hospital and pass to the care of the medical officer in command of the principal Navy hospital of the district. Institutions of the United States Public Health Service or private hospitals with which definite arrangements have been made by the medical department are utilized when the principal naval establishment is too remote from a given dispensary.

By your order 21138-43 a naval hospital reservation or compound was established around the Naval Hospital, Philadelphia, as a separate institution from the Naval Home and the naval hospital has been placed under the control of the Bureau of Medicine and Surgery and under the direct military supervision of the commandant of the naval district. This removes the naval hospital from the jurisdiction of the Naval Home, and correspondence and other papers will no longer be forwarded through the governor of the Naval Home.

NAVY HOSPITAL SERVICE IN EUROPE.

The following is a list of the original five Navy base hospitals regularly planned and established by the bureau as soon as transportation could be secured for the personnel and equipment and the necessary local arrangements could be completed, given in the order of their beginning active service:

Brest: A	Beds.
" R	 500
Strathpeffer	 500
Leith	 600
Queenstown	 600
Quechstown	 300

The first of these hospitals to receive patients was Navy Base Hospital No. 5, commanded by Captain H. C. Curl, Medical Corps, United States Navy. Much credit is due him and the staff, composed of the Philadelphia unit under Lieutenant Commander R. G. LeConte, Medical Corps, U. S. N. R. F., for the energy and ability displayed in this undertaking. The only available building for the purpose was an abandoned, antiquated convent without even the most primitive sanitary conveniences. It lacked plumbing and water supply and a vast amount of cleaning and repairing was necessary. The difficulty of securing labor and the scarcity of supplies in the local market hindered the prompt accomplishment of alterations and improvements but tact and persistance triumphed over every obstacle. Not only patients from our cruising ships but a large number of patients from the land forces have been treated here. Captain Curl has organized a medical supply depot at this point.

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The other naval hospital at Brest has been utilized almost to capacity for Army patients. It is commanded by Captain L. L. von Wedekind, Medical Corps, United States Navy. The staff is the Brooklyn unit under Lieutenant Commander W. B. Brinsmade, Medical Corps, U. S. N. R. F.

The Navy base hospital at Strathpeffer, Scotland, with its adjunct of 50 beds at Inverness, is under the command of Captain E. S. Bogert, Medical Corps, United States Navy. The staff is the San Francisco unit under Lieutenant Commander S. Stillman, Medical Corps, U. S. N. R. F. Long and trying pourparlers delayed the active operations of this organization owing to local military considerations of great importance.

The Navy base hospital at Leith is commanded by Captain C. M. De Valin, Medical Corps, United States Navy. The staff is the Los Angeles unit, headed by Lieutenant Commander R. Smith, Medical

Corps, U. S. N. R. F.

The Navy base hospital at Queenstown is commanded by Captain D. N. Carpenter, Medical Corps, United States Navy. The staff, headed by Lieutenant Commander G. A. Matteson, Medical Corps,

U. S. N. R. F., is the Providence unit.

A naval hospital of 70 beds is in operation in London, under the general surveillance of Commander E. Thompson, Medical Corps, United States Navy, the bureau's representative at the American Embassy. Minor establishments with less elaborate facilities are available for the care of our sick at Plymouth (25 beds), Cardiff (100 beds), Killingholme (75 beds), Eastleigh (50 beds), Gibraltar (50 beds), Lorient (75 beds), Paulliac (125 beds), Genoa (100 beds), Corfu (100 beds).

To this should be added the available quarters for 15 sick at each of 20 naval air stations, and suitable provisions for 100 sick in con-

nection with the Northern Bombing Station.

NAVAL HOSPITALS OF HOME AND FOREIGN STATIONS.

Annapolis, Md.—Work of repair and upkeep has gone on satisfactorily during the year. Five rooms and a bathroom have been added to the nurses's quarters. On September 10, construction was begun on 5 emergency buildings, consisting of 2 pavilions for general diseases, 1 for contagious cases, 1 for hospital corpsmen, and 1 for a subsistence building. The new buildings afford accommodation for approximately 125 patients and 50 hospital corpsmen. All cooking and messing operations will be conducted outside of the main hospital building. Dietetic appointments have been greatly improved by the establishment of a diet kitchen in which a great deal has been accomplished to make the special diets suitable, dainty, and appetizing. During the course of the year 41 major and 140 minor operations have been performed. The admissions during the year numbered 1,589, an increase of 740 over the previous year.

Canacao, P. I.—The specially constructed contagious ward has been completed though, through lack of funds, not on the scale originally contemplated. A large proportion of the contagious cases treated have come from the Army transports or may be traced thereto. Tents have been found very useful for cases of this type.

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Charleston July 31, 1917, The ward itself, surrounded by wire, is in a corner of the recently acquired reservation. A standard X-ray equipment and the erection of a suitable building to house it have been authorized. The general lighting of the hospital is by connection with the radio station. During the year 141 operations under ether were performed. The examinations made in the laboratory totaled 3,829. The con-

tagious cases treated were 126 in number. Chelsea, Mass.—The major surgical operations performed at this hospital during the year numbered 512. There were 400 administrations of salvarsan. The Wassermann test was made 1,885 times. Of these 738 were for the navy yard and outlying stations. X-ray department 1,122 plates were made. The cafeteria system of serving food, in the main mess hall, inaugurated in November, 1917, has proved highly satisfactory. During the last 6 weeks prior to initiation of this method the average daily cost of the ration was \$0.636. During the first 6 weeks after starting the cafeteria system the daily cost of the ration was \$0.588. By January the daily cost had dropped to \$0.507. There has been a marked decrease in the amount of waste food found in garbage cans. It is to be noted, however, that coincident with the establishment of this system a new chief cook was placed in charge of the galley and much credit belongs to him for the coincident improvement of ration and reduction in its cost.

Early in the year, by direction of the Bureau of Medicine and Surgery, a survey was made of the hospital facilities of Boston and vicinity. The survey resulted in formal contracts with 15 of the leading hospitals in Boston and vicinity. Of these hospitals all but one now contain Navy patients. The hospitals are regarded as adjuncts of this institution, where the service records, health records, and all statistical data are kept, except in the case of the Marine Hospital, which keeps the record of its Navy patients. The treatment is exclusively by the staff of the hospital concerned, except in the case of the Massachusetts General Hospital, an active member of whose staff is attached to the naval hospital. Medical officers are assigned from the staff of the naval hospital to supervise all patients in civil hospitals and make the necessary entries in their health records. Patients who misbehave in one of the adjunct hospitals are returned to this institution for disciplinary action. There has been very little trouble from this source. Under ordinary circumstances patients are received at the naval hospital, and a corresponding number of patients whose cases have been studied here are distributed to the appropriate adjunct hospitals. This method avoids the detail of cases that would be unsuitable for treatment in adjunct hospitals and insures the acquisition of accurate information in regard to the history of each case and its condition on admission. All patients to be returned to duty or discharged from the service return to this institution for appropriate disposition. The new construction completed or under way will bring the capacity of the hospital to 800 beds. Many improvements and repairs have been effected in the old building.

Charleston, S. C.—This hospital was not placed in commission until July 31, 1917, owing to delays on the part of contractors. There are five wards for patients with a capacity of 40 beds each, except the con-

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tagious ward, which is capable of handling 205 cases of various types of infection. The regular wards are suitably lighted and ventilated and are provided with toilet facilities. The operating pavilion includes in its equipment a complete X-ray outfit. The dispensary, bag room, laboratory, dentist's office, and offices for eye and ear work are in a separate building. There are quarters for the hospital corps and female nurses.

Fort Lyon, Colo.1—Power-house. The contract work on the installation of four 100-horsepower water-tube boilers was completed on December 15, 1917, 1,057 days over the contract time. By means of the installation of a large fan and a 35-horsepower motor the contractor was able to meet the specifications for the overload as well as the economy tests. A report was forwarded to the Bureau of Yards and Docks recommending the acceptance of the boilers, notwithstanding the fact that the boiler construction itself does not comply with the specifications. The hospital has been using the boilers for three years, and they are in excellent condition at the

present time.

In the sanitary report for 1916 attention was invited to the fact that the power requirements at the hospital would soon be in excess of our present needs. This deficiency will become more apparent in the near future. It will be necessary to install two new boilers of 200 horsepower capacity. The steel smokestack has already passed the normal life allotted to such construction, and with the new boilers will be of insufficient capacity. A brick stack has been recommended. It is believed that while this construction is going on the entire boiler plant should be remodeled in order that it may be run in an economical and efficient manner. The Bureau of Yards and Docks has intimated that an officer would be detailed for temporary duty at the hospital to prepare requisitions and contracts for

The present supply of artesian water barely fills the hospital wants at its present capacity. A contract has been let for the sinking of a 12-inch artesian well. It is believed that with the hospital at its full estimated capacity a second well will be necessary. Electric-driven, double-acting pumps have been recommended and contracts have been let for two of these pumps, one of which will be installed on our old number one deep well. A contract has also been let for the construction of a 400,000-gallon fresh-water storage tank. The foundations are already in, and work on the tank should commence soon.

The recommendation for the increase and improvement of our heating system, made in the last sanitary report, having been approved by the bureau, the work of reconstruction is now under way.

The pipe has been received and two new 300 G. P. M. electricdriven, centrifugal pumps are in process of installation. In order to provide for sufficient heat for the estimated increase in the hospital capacity it will be necessary to have installed by November 1, 1918, two new hot water heaters, and two 200 h. p. water-tube boilers in order to provide for the greatly increased volume of hot water neces-

¹ The Naval Tuberculosis Hospital.

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As soon as i were to be pern made for the pe seemed probable the calendar year per thousand. due to war-time estimate for the vided for here, w It is believed that the present provision for cold storage will be ample for the future, so far as meats, butter, and eggs are concerned. It will be necessary, however, to provide a cool room for fruits and vegetables. This will be accomplished by insulating and piping the present meat-cutting room and commissary store. A two-story addition to this department is already 50 per cent completed; it will provide for a new commissary store—second story—and a new meatissuing room, with facilities for the proper care and preservation of pork products, a large supply of which is now obtained from the farm.

The work of the commissary department during the past year has been of a satisfactory nature. Owing to the considerable amount of construction work going on during the greater part of the year, this department has been called upon to provide rations for a group of people continually growing in numbers. The monthly transfer of funds from the "Navy Supply Fund" to the "Hospital Fund" now totals more than two thousand dollars. The commissary store has again outgrown the quarters which were considered adequate a short year ago, and early in the coming fiscal year will be transferred to a more convenient location, having nearly double the floor space of the present store. The necessity for increased storage facilities is becoming more acute from day to day. This will be met by the construction of a fire-proof and vermin-proof storage house, located near the cold stores, of such dimensions as to insure ample storage room for the food supplies of 1918.

There has been a gradual increase of cost in the ration since the second quarter of 1916. It is hoped that we have about reached the maximum; that the constantly increasing amount of commissary supplies being produced on the farm will prevent a further rise in the

cost of the ration.

Cost of daily ration for 2d quarter, 1916	e0 E04
Cost of daily ration for 3d quarter, 1916	\$0. 524 5267
Cost of daily ration for 4th quarter, 1916	575
Cost of daily ration for 1st quarter, 1917	579
Cost of daily ration for 2d quarter, 1917	607
Cost of daily ration for 3d quarter, 1917	6202
Cost of daily ration for 4th quarter, 1917	667
Cost of daily ration for 1st quarter, 1918	773

The bake-oven has given much trouble during the past year. A contract for a new Peterson oven has been let, and when completed will permit the overhauling of the old oven; it can be repaired and will be useful in emergency. In order to conserve our supply of ice the purchase of a modern, brine ice-cream freezer will be recommended. This machine will effect an economy in the cost of ice

cream, as well as improve its quality.

As soon as it became apparent that the Navy and Marine Corps were to be permanently increased to about 180,000 men, plans were made for the permanent increase in the capacity of this hospital. It seemed probable that the incidence of tuberculosis for the service for the calendar year 1917 had been reduced to about the ratio of three per thousand. Allowing for some inevitable increase in this ratio due to war-time conditions, the ratio of 3–5 was used to make the estimate for the probable ultimate increase of patients to be provided for here, which would furnish quarters for about 700 addi-

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tional men at the outside. In order that this increase might be arranged for in the most economical and efficient manner it was necessary to group the buildings in as close proximity to the present subsistence buildings as was safe in order to avoid the establishment of any additional messes or kitchens. This requires a group of buildings about the men's infirmary to provide for some 250 patients. A new dining room and an addition to the kitchen already present form a part of this group. The second group has been arranged about the present convalescent lean-tos and west wards to provide for about 500 patients. A new dining room and an addition to the kitchen of the west subsistence building to mess these patients are already well under way.

Thirty cottages of the Aladdin type were contracted for, each to accommodate 5 men. It was thought they could be made ready for occupancy in less time than would be required for the construction of wards of the "lean-to" type. The last of the material for these houses was delivered about a week ago; 20 are under construction; 13 could be made ready for occupancy in two weeks' time if plumbing material could be obtained. Three lean-tos, each accommodating 16 patients, are in the same stage of completion, as well as the nurses' home. All ward construction has been planned to be of the "lean-to" type. This work will be finished as rapidly as

possible.

During the past year 160 acres of land have been added to the farm area. About 80 acres of this land are capable of cultivation and as . much of this area as it is possible to water this spring will be put under cultivation. Much development work remains to be done on the water rights purchased with this land, as it is hoped to develop enough water for use on the land already under cultivation to avoid the further use of water from the Fort Lyon canal. This requires the installation of two pumping plants, one of which will be located on the southern portion of the recent purchase and will be installed as soon as possible. The location of the second can not be determined until it is decided whether or not Congress will authorize the purchase of an additional tract of land which is needed for a further increase in the dairy herd. Unforeseen delays may necessitate the renewal of our contract with the Fort Lyon Canal Co. for one more year. Development of the home farm is being carried on as rapidly as water can be provided for its irrigation. There remain about 30 acres west of the garden to be broken up; it is believed this will be accomplished during the coming spring. It is believed that the water supply in the well at the main gate will be approximately doubled by the installation of four gathering wells, their water being conducted to the main well by siphonic action. This plant is in process of installation at the present time.

The sinking of a new well at the northeast corner of the garden will ultimately provide for sufficient water to irrigate the tract of land occupied by the cemetery. It is planned to start some trees and grass on this plat. There are some 10 or 15 acres here that will

also be available for farm uses when irrigated.

The concrete sump at the pump house, main gate, had to be abandoned for the uses intended, as it could not be repaired. A steel head has been placed on one of the old boilers and this has been installed

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in the sump. The connections have been so arranged as to warrant the belief that it will prove to be more useful than the former sump.

The rainfall for this section during the past year was 11.18 inches. Notwithstanding the fact that it was distributed during the growing season, the year was the second of two unusually dry seasons. This resulted in a greatly diminished water supply from the Fort Lyon canal, and required the almost constant operation of our pumping

plant.

The dairy herd is developing very favorably. There are at present 68 adult animals, and 50-odd calves of all ages. Three cows have been lost by being thrown into the hay rick and dying during the night. One has been butchered as not being of sufficient value as a dairy producer to pay for feeding, and was turned in to the commissary mess. The herd is now producing about 160 gallons of milk daily; it is expected that this will be increased to 185 gallons in the near future, and that this average will continue during the remainder of the year. A relatively small amount of milk will have to be purchased from time to time until the herd is enlarged in numbers through natural increase. It has been planned to start this herd free of the usual diseases, common among dairy cows, and, by breeding our own increase, keep it so. Two finely bred bulls have been selected for the herd, and it is anticipated that the herd will develop as planned. It is also planned to raise the bull calves and fatten them as baby beef for the commissary mess. With a small increase in the acreage of our grazing land this scheme can be carried out and will result greatly to the advantage of this mess. It will not be possible to keep all of the heifer calves; a few will be selected for the herd, a very few will be used for veal, and the remainder will have to be disposed of in some other manner; they will be too valuable for veal, but not good enough for our herd.

The herd of hogs has done nicely during the past year. It is proposed to slaughter about 150 animals and turn them into the commissary mess during the year. By the end of 1918 it is believed that

all will be pure bred.

In order to safeguard the control by the hospital of an abundant supply of hard water for flushing purposes, fire protection, and irrigation, there was obtained an allotment for funds for the construction of a dam across the lowlands along the east boundary of the reservation. This water normally flowed to the east and away from the building area. The land, however, was so flat that it was only necessary to raise its level at the east boundary 1 foot to cause it to flow west. A dirt dam has been constructed with a heavy coating of stone along its sides to control the action of the muskrats, and with an average height of 3 feet above the old water level. This water now flows east into the sump near the power house, with its overflow into a ditch controlled by a head gate, thence into the channel of one of the hospital sewers and on into the river. The project is nearly completed, and at present there is available for all times a large body of hard water for such uses as may be necessary. Recently a representative from the National Underwriters' Association visited the hospital for the purpose of making a thorough inspection of our fire protection system. Up to the present time his report has not been received at the hospital. He naturally found

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to be aban A steel head been installed many defects and suggested remedies which can be easily applied. Allotment of funds has already been made for this purpose, which will doubtless be ample in amount. The work will be finished as rapidly as possible.

As regards the résumé of classes of patients admitted here during the year, the following items compared with those of 1916 are of

interest:

Navy and Marine Corps officers, active list, original admissions (both for 1916 and 1917)	
Enlisted men, Navy and Marine Corps, original administration	13
Enlisted men, supernumerary (previous admission la) (22	239
Ex-enlisted men and retired officers supermental super	39
entry) (20 in excess of 1916)	28

Under nontubercular enlisted men, Navy and Marine Corps, there were 50 admissions in excess of 1916. The total of all cases treated

during 1917 was 120 in excess of 1916.

Notwithstanding the bureau's circular letter to the various hospitals and stations directing that certain of these cases should not be sent to this hospital, many cases are still transferred here that should be discharged and sent to their homes or places of enlistment. With the Navy personnel made up of less than 100,000 men, the comparatively small number that would remain here was of little moment. At present the Army is sending all these cases to their home towns, with a letter to the chairman of the local chapter of the Red Cross, who looks after their interests in case they have no home to go to. As will be noted the great majority leave the hospital after about a month's residence, during which time they have acquired few of the benefits the hospital has to offer them, and their cost of transportation is so much money wasted. Thirty-five per cent of the January, 1918, admissions belong to this class of cases. It is urgently recommended that suitable steps be taken to reduce this practice to a minimum.

Of the 271 original admissions for tuberculosis, active and supernumerary, 18 cases, or 6.6 per cent, were complicated by a concurrent syphilitic infection. The clinical history of all these cases indicates that this disease exercised a determining influence on the outset of the tuberculosis. The break in resistance following active syphilis is most pronounced, and is almost invariably accompanied by the same blood picture found in neglected advanced stage cases of tuberculosis. This observation is common among recent authors on tuberculosis; its bearing on the probable cause of the disease in service cases, as being in line of duty, is apparent. The writer is of the opinion that any service case, giving a clear history of active syphilis, shortly preceding the onset of symptoms of tuberculosis, should have the latter disease recorded as "not in line of duty," and particularly so in case the syphilis is associated with a history of alco-

Of the 271 original admissions for tuberculosis, 105, or 36.5 per cent, are recorded as incipient, or first-stage cases. As noted in previous sanitary reports, this record is obtained as the result of a most liberal interpretation of the physical signs present and the

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tion to the de and treatment be transferred should not be separate buildi recorded clinical histories. As a matter of fact, but few truly incipient or early cases of tuberculosis are admitted here.

Forty-four, or 15.3 per cent, of these admissions were of secondstage cases, and 122, or 42.5 per cent, were of third-stage cases in a more or less advanced-stage development. These percentages, if known to the medical officers of the service, should serve as an incentive to more accurate observation in the study of patients as they

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centive to more accurate observation in the study of patients as they present themselves, complaining of symptoms pointing to affections of the respiratory passages. This is of the utmost importance when one considers that this disease still outranks all other disabilities recorded for the service, as having the greatest number of sick days to its credit, and, notwithstanding that it is of vital importance to the patient that he should be placed under favorable conditions of treatment at the earliest possible moment, it is of equal importance to the service, as an essential element of preventive medicine, that tuberculosis patients should be removed from ships and general hospitals, if possible, before they become a source of danger to their mess-

mates.

During the past year the routine treatment employed has been a continuation of the methods reported in the annual sanitary reports since 1915. Reference to the statistical table appended and marked "A" shows in a comparative manner the results obtained. During a portion of the past year we took up again the use of tuberculin, using a method of administration advocated by Dr. E. Bonime, of New York City. For a time we undertook to make it a routine measure. The essential feature of the method consists in the use of tuberculin in sufficiently high dilutions, in doses so minute as to cause little or no reaction. The method is a simple one, but the technique necessary to insure success is rather complicated and consumes much time in its acquirement. In carrying on the treatment it is not possible to delegate to untrained assistants any of the steps in its administration. For these reasons it is not adapted for a routine measure in a large institution of this sort; however, much good has been accom-

There are at present two members of the nurse corps (female) stationed at the hospital. They are occupying a set of officers' quarters. They were transferred from Fort Bayard, where both of them had been under treatment for tuberculosis for a considerable period. The disease is not active at present in either case and both are doing duty. Miss Knight is in full charge of the laboratory and is doing excellent work. Miss Walsh has been detailed for light duty at the officers' infirmary, where her work is much appreciated by both duty men and patient officers. It was hoped to have the nurses' home ready for occupancy by March 15, but its final completion will be delayed more than a month through nondelivery of plumbing material.

plished with this method where the work was done by the medical

A report has already been forwarded to the bureau calling attention to the desirability of providing separate quarters for the care and treatment of members of this corps, who may from time to time be transferred here for this purpose. There is no reason why they should not be cared for here, but there are many reasons why a separate building should be provided for this class of patients.

" A."

Statistical summary of tuberculosis patients and final disposition of these cases for the year 1917.

	Classification.			-
	In- cipient.	Moder- ately advanced.	Far advanced.	Totals by di- visions.
Remaining from last year. Original admissions, etc.¹. Readmissions. Discharged during the year. Continued to 1918.	59 105 4 91 77	80 44 1 72 53	90 122 11 108 115	229 271 16 271 248

	Num- ber.	Days.	Num- ber.	Days.	Num- ber.	Days.	Num- ber.	Days.
Dead . Unimproved . Improved . Quiescent . Apparently arrested . Arrested . Apparently cured . Diagnosis changed to nontubercular	5 20 23 18 7 10	1, 192 1, 510 5, 156 7, 702 1, 606 5, 062	2 18 25 11 5 4	514 9, 197 10, 018 6, 198 2, 087 3, 430 1, 114	43 30 26 2 4 1	12, 334 7, 954 7, 665 444 1, 360 454	50 68 74 31 16 15	14,040 18,661 22,839 14,344 5,053 8,946 1,114
Continued to 1918.	8 77	2,725 23,186	6 53	2,475 20,447	2 115	909 34,421	16 245	6,109 78,054
Total	168	48,139	125	55, 480	223	65, 541	516	169, 160

Total sick days of cases continued to 1918.

Total sick days of cases discharged during 1917.

78,054
91,106

1 Original admissions, officers and enlisted men, ex-enlisted men, and retired officers. Of the original admissions 243 were enlisted men and officers of the Navy and Marine Corps; 28 were ex-enlisted men or retired officers, the latter never having appeared on any return from this hospital.

"B."

Review of treatment and results for the years from 1911 to 1917, inclusive.

Year.	Admissions.	Dis- charges.	Con- tinued to following year.	Average number sick days for each discharge.	Average number sick days for each case con- tinued.	Deaths.	Average number sick days per death.	Total number sick days for all cases, both discharged and continued to the following year.
1911	215	212	146	244.6	284. 7	33	246. 0	93,674
1912	182	190	142	252.6	310. 8	26	194. 0	92,132
1913	235	159	208	312.0	235. 7	22	236. 8	103,156
1914	244	221	231	264.1	305. 5	43	191. 1	128,946
1915	200	207	224	370.3	325. 5	36	259. 4	149,812
1916	224	219	229	376.2	359. 0	44	238. 0	164,612
1917	287	271	225	325.1	346. 9	50	280. 8	169,160

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Weather report—Synopsis of report for calendar year 1917.

	Average maximum.	Average minimum.	Average variation.	Average mean.
January February	50.4	12.0 19.0	32.0 31.0	27. 7 34. 6
March A pril May	69. 0 70. 0	22. 0 36. 0 45. 0	57. 0 27. 6 23. 0	40.0 48.5 59.0
JuneJuly JulyAugust	96.5 92.3	55. 0 63. 5 57. 0	33.5 37.8 30.0	72. 0 79. 4 71. 7
September October November	73. 0 83. 8	51. 2 35. 2 28. 8	29. 0 30. 9 34. 5	68. 0 54. 8 46. 3
December		14. 3 37. 4	37.8	33. 0 52. 9

Navy standard maximum and minimum Fahrenheit thermometer used. Maximum and minimum temperature recorded daily. Total rainfall for the year, 11.18 inches (1.01 inches less than normal).

Great Lakes, Ill.—The original hospital facilities were adequate for 120 patients, but not complete for contagious cases. This fact was recognized by the bureau and within a month of the declaration of war work to remedy this defect had been begun, contemplating the erection of 3 contagious buildings with a capacity of 25 beds each. The construction of 6 additional contagious units with a capacity of 40 beds each, a subsistence building for this group and the barracks for the hospital corps was begun July 6, about the time when the first 3 wards were completed.

The hospital plan was further expanded by the construction of 20 additional wards, 2 subsistence buildings, nurses' quarters, civilian barracks, hospital corps barracks, 2 garages, power house, laundry, storehouse, tool shops, incinerator building, and brig. The wards were designed to hold 50 patients each, giving an approximate capacity of 1,000 beds. None of these buildings erected this year have a forced system of ventilation, but by means of ceiling ventilators and the proper adjustment of the patients which the wards will hold the ventilation is adequate. The wards designed for 50 beds are really filled when they have 40 patients, thereby reducing the number of beds to a normal capacity of 800, and this should not be increased to the designed number of 1,000 for any considerable period of time, as the wards would then be overcrowded. Taking these wards together they have a capacity of 1,215 patients, but could readily expand, if all wards were filled, to approximately 1,400. Of course, this is not possible owing to the fact that certain of the contagious wards would not be filled, and still space must be had for the various contagious diseases. Provision was made by the bureau to meet this contingency by having 3 of the contagious wards divided by partitions into 3 small wards each, and this has been of very great value in handling small groups of contagious cases, thereby putting fewer beds out of commission. The construction work on the emergency hospital was begun on August 13, and the

78,054 91,106 original men or

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9,160

Total
number
sick days
for all
asses, both
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following year.

93,674 92,132 103,156 128,946 149,812 164,612 169,160

first of the buildings was occupied on November 6, 1917. This group of buildings is practically completed, only a small amount of work, such as pipe covering, etc., remaining to be done. The buildings have proved extremely satisfactory, the contagious wards being all that could be asked for in the way of contagious buildings, and these buildings may be considered permanent, inasmuch as the character of construction is as good as could be desired under any circumstances. The so-called emergency hospital construction work was not of so good a character. It was not designed to be so, but, if adequately cared for, should be perfectly good for 20 years or longer. has been necessary, of course, to go over the entire equipment which was here at the beginning of the year, increase it and replace it to meet the greatly increased number of patients that had to be accommodated, increasing the capacity of the galley, replacing the old dish-washing machine, installing a much larger and better ice machine. The carbonic-acid-gas machine which was in this institution originally was subject to constant breakdown, had no ice-making capacity at all, and was used as a refrigerating machine. The hospital had to depend for its ice on the training station, and the problem of transportation had to be considered, so that the installation of the new machine has been much more satisfactory in every

During the summer months, from the spring until the autumn before the new buildings were available, the patients were treated largely in tents where the cases were suitable. These tents were procured, a few by requisition, but in the main from the training station. Practically the entire hospital ground was devoted to these, making a very satisfactory method of treating the patients. There were, of course, some difficulties at times in procuring materials, but, considering the emergency, the care of the patients has not suffered

seriously in consequence of the housing facilities.

Sewage has been disposed of by sewers, and a new disposal plant has been erected by public works in addition to the one originally installed. The new plant will probably be adequate to handle the sewage of the new station when once it is completed. It is now in partial operation. Both of these disposal plants are situated on or near the small hill across the ravine from the medical officers' quarters. At times when the wind blows from the east and southeast they are most objectionable. It is expected that when the new plant is in full operation these objectionable features will be done away with. The emergency hospital buildings are all connected with the new sewer which runs through the hospital grounds. This sewer is 2 feet in diameter, and seems to be handling the sewage in the proper manner.

The garbage from the hospital and food refuse is being sold, and so far the contractor has cared for the waste in a satisfactory manner. Certain refuse from the contagious wards and dressings from the operating room have to be burned. This has been done in a small incinerator which was removed from the main hospital early in the year and erected for the purpose on the edge of the ravine. The disposal of the refuse has not been offensive in any way, and when the new incinerator, which is now under construction, is completed this feature will be adequately cared for in every way.

Two been im in use c authoriz Number of Admissions Readmissio Patients rel Invalided fr Died (1917) Ran (1917) Number of o Number in he Number of nu Civil employe Medical officer Sick days for Daily average

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A fire-alarm system is to be installed in the hospital group. This is very important because of the inflammable type of the temporary construction which has been put up. The main hospital is of fire proof construction, well supplied with hydrants in the building and with a sufficient amount of hose and other appliances to handle anything that could possibly arise in this building. Fire hydrants have been placed around the new units, no hydrant being over 200 feet distant from another. There have been purchased 1,500 feet of standard fire hose, and the delivery of an additional 1,000 feet is being awaited. An automobile chemical fire engine was provided, which carried in addition to the regular equipment 500 feet of fire hose. The balance of the fire hose is placed in boxes constructed for the purpose at various points about the new hospital buildings in the vicinity of the hydrants.

All of the new buildings are heated by steam, the entire contagious group receiving its supply from the central power house on the station, and the emergency hospital, nurses quarters, and garages being heated from the power house erected with the emergency hospital. The temperature has fallen here as low as 10 below zero, and at no time was there difficulty in keeping the wards sufficiently warm. The steam pipes in the nurses' quarters are connected not only with the steam supply from the central power plant on the training station but also with the new power house on the hospital grounds, and should it be necessary a reasonable amount of steam could be had from either place, which would give at least some heat to the build-

ings and enough to prevent freezing of pipes, etc.

The bathing and toilet facilities in the new emergency hospital are adequate for any call that may be made upon them. In fact, the new hospital plant is very satisfactory in every respect.

The operating room is in the main hospital, and is fully adequate to the need. The equipment on hand now and that which has been authorized and will be here shortly will be all that is required for any surgical work that may present itself.

The three motor ambulances provided have answered the purposes

of transportation very satisfactorily to date.

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Two 2-ton automobile trucks were provided, and it would have been impossible to carry on the work without them. They have been in use constantly since they were received. A third truck has been authorized and is greatly needed.

Summary of statistics.

g of otherwise.	
Number of cases carried over from 1916	
Admissions for 1917	817
Readmissions for 1917	5, 448
Patients remaining Dec. 31, 1917	¹ 927
Invalided from the service (1917)	252
Died (1917)	1110
Ran (1917)	13
Number of operations	368
Number in hospital corps	208
Number of nurses	58
Civil employees	
Medical officers	
Siel de Control	28
Sick days for year (1917)	137, 807
Daily average of patients	² 377
	0

¹ And 1 supernumerary.

Spinal meningitis and pneumonia cases for the year 1917.

	Pneur	nonia.	Spinal meningitis.		
Month,	Admit- ted.	Died.	Admit- ted.	Died.	
January February March April May June July to October 1	5 10 10 7 38 21 6	2 2 1 3 2 1	3 11 15 22 37 11 1 7	2 5 8 7 8 3 1	
November. December.	28 35	3 4	5 23	1 7	
Total	170	18	134	42	

1 July to Nov.

Total admitted.
Total died
Spinal meningitis:
Total admitted.

League Island, Philadelphia, Pa.—Work was commenced in May and the buildings were ready for occupancy and the receipt of patients on October 1, when the hospital was formally opened.

The hospital consists of 16 one-story pavilions, facing as a whole to the south, the wards and living quarters, with the exception of the sick officers' quarters and the nurses' quarters, running on north and The remaining buildings stand on east and west lines. The front of the block is occupied by the administration building in the center and the nurses' and sick officers' quarters on either side. To the rear of these are five wards, and centrally located, the operating pavilion. In the rear of the wards and connected with them by a covered walk and solaria, are the mess hall and the kitchen. The store house, shops, garage, laundry, mortuary, and the barracks are located to the rear of the above. Barracks No. 1, at the southwest corner, is assigned to the hospital corps and barracks No. 2, at the southeast corner of the block, is assigned to the other enlisted personnel. None of the civilian employees are quartered on the reservation.

The buildings are of light, pine construction, supported on concrete pillars. The living quarters, wards, sick officers' quarters, the two barracks, mess hall, and kitchen are ceiled and sheathed. The floors in the kitchen, mess hall, garage, toilets, and operating pavilion are concrete. All other floors are of matched pine, laid double. Water-proof paper is used on the roofs. All the living quarters have a ridge ventilator extending the entire length of the building, openings in the ceiling allowing the passage of air currents from the living space to the loft. Artificial light is supplied from the yard plant, lighting current being 110 volts, A. C., in addition to which direct current of 220 volts, 3 phase, 60 cycle is furnished for the motors, special diet ranges, and other power purposes.

Drinking water is supplied from the city mains. In addition, Delaware River water is furnished for the sewage disposal and for the fire mains. There is no connection between the two systems. The sewers discharge into the yard mains, the fall being very slight and

ru pl cul Wa trib requ In s pipe died The Front orator office a tory, e latter r The r fitted fo his relie the medi Quarte in a room but this The rooms The ope by a cover plans is us graphic pla etherizing re ating rooms heated. The vided with levers. The placed by a sl the summer me criticism is th larger. The ce wear rapidly.

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it is feared that at high tide it will back-up, but so far no difficulty has been experienced. The plumbing is of good quality and design. The buildings are heated by steam from the plant common to the seamen's barracks and the hospital, through overhead high pressure (60 to 100 pounds) mains and delivered to the various units and there reduced to 4 to 10 pounds before entering the radiators. No return line is provided, the radiators exhausting through traps into the sewers or sump wells. The various sterilizers are connected direct with the high-pressure lines, as are also the water heaters in the loft of each unit. This arrangement permits the supplying of steam to these appliances without having steam on the heating lines of the buildings. The water heaters are furnished with thermo-regulators. but in case the above allows undue pressure in the heaters, safety blow-offs are provided. It was discovered that the latter were not run through the roofs, but this has since been remedied. The heating plant is, as a whole functioning satisfactorily. Considerable difficulty has been and is still experienced in keeping radiators free from water, owing to the failure of the traps to carry it off. This is attributed to dirt, scale, etc., in the pipes working down into the traps. requiring the services of the hospital plumber to open and free them. In several instances, the traps were insufficient in size to relieve the pipes of the water of condensation, but this difficulty has been remedied by the installation of larger traps.

The rooms of the administration building are assigned as follows: Front—west to east—commanding officer's office, bacteriological laboratory (temporary extension), officer of the day's office, pharmacist's office and record room. Rear—west to east—bacteriological laboratory, executive officer's office, dispensary, nose and throat room; this latter room is also used as a board room.

The rooms in the building for sick officers' quarters have been outfitted for patients, with one room each for the officer of the day and his relief. The living room is used as a rest room and library for the medical staff.

Quarters are provided for 11 nurses and a chief nurse, with but one in a room. In case of necessity 20 nurses could be quartered here, but this would result in some discomfort through overcrowding. The rooms, while small, are comfortably furnished.

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The operating pavilion is connected with the surgical ward "D" by a covered way. The room designated as the laboratory on the plans is used for a developing room and for the storage of radiographic plates. The room opposite contains the X-ray outfit. The etherizing room does additional duty as the eye room. The two operating rooms are admirably suited to the work, being well lighted and heated. The surgeons' and the nurses' preparation rooms are provided with wash-up basins, having gooseneck faucets with knee levers. The toilet adjoining the surgeons' wash room should be replaced by a shower bath, which is greatly needed especially during the summer months. The sterilizing outfit is complete and the only criticism is that the dressing sterilizer could, with advantage, be larger. The cement floor in this building is rough finish and will wear rapidly. In future contracts it is suggested that smooth, hard finish be specified.

The five wards are in use as follows: "A" (two sections)—For contagious cases; "B"—Medical cases; "C"—Medical or surgical, as required; "D"—Regular surgical ward; "E"—Venereal ward. The wards are essentially similar, having two quiet rooms at the south end and a diet kitchen, nurse's room, and a dressing room at the north end. Solaria were added to the wards after the buildings

In this connection it is desired to invite attention to the advantage that would result from having a medical officer of experience in hospital construction assigned as technical inspector at an early stage in the building of hospitals. There are many features of this class of work which are unfamiliar to the average civil engineer and his assistants, and which are not provided for in specifications. But little attention was given here during construction to the placing of drains for cement floors or to the proper pitching of floors. This is particularly true of the floor in the kitchen, where deep cuts in the floor are required to permit drainage water to reach the drains. The door locks are generally defective, due to broken bolt springs and loss of knobs. They are being replaced by the

This hospital was among the first organized to utilize the services of a personnel mobilized under the Red Cross, in this case naval station unit No. 2, recruited in Philadelphia. Owing to the relative shortage of experienced naval medical officers and naval nurses but a few of them could be detailed to this duty, the commanding and executive officers, three pharmacists, a chief nurse, and surgical nurse being the only representatives of the regular service in the higher grades ordered to this hospital. The hospital corpsmen are enlisted in the regular service, but with few exceptions are entirely inexperienced, both in their technical duties and in Navy methods and routine. Other enlisted personnel, such as yeomen, cooks, artisans, mess attendants, etc., are detailed largely from the Coast Defense Reserve, a few ratings in the regular service having been detailed from the receiving ship by the commandant to fill ratings at that time unobtainable from the Naval Reserve. The medical, surgical, and nursing staff is composed of those eminent in their specialties and at the same time well grounded in general practice. It has been thought advisable to retain the unit organization, having the director take over to a certain extent the duties of the executive as far as relate to the care of patients. He coordinates the work of the staff and keeps the commanding officer informed as to the condition of patients and makes recommendation as to discharge and survey. It is not intended that this arrangement in any way relieve the proper officers from responsibility, but it does relieve them from a multitude of minor affairs which are taken up between the director of the staff and its members. Through the director of the unit the commanding officer is kept constantly informed of the condition of patients, and he also receives any recommendations that may be made which will tend to the comfort and recovery of the sick. This gives the commanding and executive officers more freedom to attend to the military side of the hospital work and the inforcement of disat uniform cipline, the procurement of supplies, and the maintenance of buildings and grounds, and lastly, the keeping of records, which, with a were made

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personnel unfamiliar with this kind of work, requires constant observation and instruction.

Through the director of the unit, special orders and instructions are issued to the staff regarding the manner of performing their duties. The director of the unit takes charge of sick officers and the surgical service, having as an assistant one of the junior medical officers, who keeps clinical histories and attends to the dressings. The operating work has been divided so that all those desiring to operate have the opportunity. The executive officer has availed himself of this opportunity to perform operations. Forty-five operations, which may be classed as major, have been successfully performed without any fatalities except one case of mastoiditis, in which septicemia had already developed. The operating pavilion is in charge of a member of the naval nurse corps and assistance is rendered by hospital corpsmen, who, as soon as fairly trained, are relieved by understudies as the latter become proficient. In this way, while preserving a nucleus of trained corpsmen in the operating room, it is endeavored to have a constant stream of hospital corpsmen passing through this training. The anaesthetizing, usually ether, is under the charge of a specialist in this line, who gives practical instruction to the hospital corpsmen detailed for that purpose.

The medical service is under the internist of the unit with a junior officer as an assistant. In this, as in all other services, a complete history of each case is taken and continued, the complete case history being filed in the record office. A thorough physical examination is made in each case and, if indicated, the patient is referred to the various specialists for further examination. Three cases suggestive of cerebro-spinal fever have occurred, each giving Kernig's sign, but spinal puncture and cultures of the spinal fluid and of fluid from the nasopharynx were negative. All these cases occurred without any further signs developing. Seventeen cases of pneumonia occurred with three deaths and there was also one death from sero-fibrinous pleurisy. The prevailing organism has been of Types I

and IV, pneumococcus.

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The medical officers in this laboratory deserve great credit for the efficient manner in which they have organized and trained the personnel of the laboratory, so that at the present time, even with the limited space available, they are in position to culture 500 cases a week in addition to their routine work. The advantage of having a well equipped laboratory in the yard is shown in the recent appearance of a case of diphtheria at the seamen's barracks. This laboratory at once made cultures of 29 contacts, which, when found to be negative, were released from quarantine and no further cases developed. Through the ingenuity of one of the officers attached to the laboratory, electrically heated boxes have been provided to keep culture media at blood heat, while smears are being made for meningococcus. These boxes can be attached to the electric lighting circuit in any place so that, if necessary, a force from the laboratory could be sent to distant stations and cultures taken and maintained at uniform temperature until placed in the incubator.

Mare Island, Cal.—While as a precautionary measure contracts were made with hospitals in San Francisco to care for patients in

excess of the accommodations at Mare Island, the purchase of tents made it unnecessary to send any patients away from the hospital reservation. The total number of laboratory examinations was 17,741. The major operations performed during the year numbered 248, the minor operations, 259. In the nose and throat department 469 tonsillectomies were done. The total admissions amounted to 6,686, of which 1,388 were for measles, 570 for German measles, and 21 for cerebro-spinal meningitis. The emergency hospital construction authorized August 21 has been completed. It consists of 4 wards, 3 subsistence buildings, each comprising a kitchen and 2 mess halls, a hospital corps barracks accommodating 100, nurses' quarters consisting of 26 rooms, an incinerator and extensions to laundry and power plant.

New Orleans, La.—This hospital was placed in active operation on November 12, 1917, with the transfer of 20 patients from the station dispensary. At that time only two of the 20 buildings comprising the hospital plant were incomplete and these, the mortuary

and brig, had only been lately authorized.

It has been found to the benefit of good administration to rearrange the offices in the administration building. The larger room, which was assigned on the plans for an examining room, has been utilized for general office work in connection with the executive officer's office and for the switchboard operator, and a smaller room has been substituted for it. The construction of a separate laboratory building left one room in the administration building unused, and this is being employed as an office for the executive officer, and the room plotted for that officer has been fitted up as a waiting room.

The operating pavilion is satisfactory in every way, except, perhaps, in the flooring. This is of concrete construction, and is too porous to be properly adapted to the purpose, and it is not laid with efficient drainage fall in the main operating room. These defects are, however, of such minor importance as to be lost in the general excellence of the pavilion as a whole. The equipment is generous in quantity and in quality and meets the requirements for any surgical procedure. The X-ray plant in equipment and space leaves little to be desired. The generator is not yet adjusted to the highest degree of attainment, but it is expected that the contractors will finally make this possible.

The laboratory will represent, when its entire equipment is delivered and installed, a modern and model workshop for general research work and routine hospital investigation. Its design and

orientation practically reaches ideal conditions.

The water supply is adequate and of good quality, being obtained from the mains of the city plant. The food supply and its preparation is thus far satisfactory, and considering the high market cost of all provisions is not unduly expensive per capita. The per diem ration at the end of the year was averaging 67 cents per capita. The galley equipment and personnel give evidence of being equal to the requirements of the full capacity of the hospital. It is too early as yet to make comment on the efficiency of the members of the nurse and hospital corps. Indications are, however, that the nursing staff attached to this hospital represents a body of men and women above the average in intelligence, and gives promise, from the interest of

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its members in the work assigned them, of giving service of a high order.

It is recommended that construction material for four complete ward pavilions be assembled to meet a sudden demand for increased capacity, this material to be held in reserve for the purpose.

New York, N. Y.—This hospital has been the scene of unusual activity along many lines. Besides extensive overhauling and repair of existing buildings new construction has been begun and is nearing completion to accommodate 272 additional patients and further buildings to house 524 patients are contracted for or begun. A new power house is being built and a complete plant for handling and storing coal is to be provided.

The following summary gives but an inadequate idea of the professional work accomplished during the calendar year 1917:

Number of patients admitted and treated	5,942
Number invalided from the service	0, 944
Number invalided from the service	410
Number died	51
Number of surgical operations requiring anesthesia	400
Number of X-ray pictures	400
Transcript at any pictures.	2,296
0	11,562

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Many of the patients have been assigned to various civilian institutions for treatment under the supervision, both medical and military, of the commanding officer of this hospital, and their wide separation throughout Greater New York has added markedly to the duties devolving upon the hospital staff.

Newport, R. I.—The following comparison between the numerical force of the staff and of patients in the hospital on the corresponding days of 1916 and 1917 well illustrates the increased facilities which have developed at this hospital to meet the needs of the greatly increased personnel:

	Dec. 31,1916.	Dec. 31, 1917.
Officers on duty: Medical	: 4	1
Pharmaceutical Nurses on duty Hospital corpsmen Patients in basniful	13	4
Patients in hospital.	28 62	

During the year 14 new buildings have been constructed to accommodate 390 additional patients, in contagious and pavilion wards. The garage has quarters for 20 civilian employees. A special pavilion can accommodate 21 female nurses or sick officers and four servants. A special building for the hospital corps will accommodate about 150 men. Buildings have also been put up for field laboratories and for the commissary department. These new buildings are designated "temporary structures," but they are of excellent construction, and will be adapted to the purposes contemplated. The garage, however, is of brick and permanent in type. In August the temporary use of three ward buildings and various minor facilities and the services of some members of the hospital staff were offered to the city of Newport to assist the civil authorities in meeting the acute emergencies due to the widespread epidemic of diph-

theria. This prompt aid was much appreciated by the health authorities of Newport and greatly facilitated the rapid control of the epidemic. Care was taken not to assume the attude of "taking charge," and emphasis was placed on the fact that the hospital was

There has at times been some crowding of patients in the wards. This was greatest during the period immediately following the entrance of the United States in the war, when recruits were arriving in large numbers at the training station in advance of the completion of necessary housing facilities. The effect of this crowding at the training station was mainly apparent in the increased number of cases of the more common contagious diseases transferred to the hospital.

Norfolk, Va.—The average complement of this hospital during the first quarter of the calendar year 1917 was 212. When war was declared steps were immediately taken to enlarge the patient capacity of the establishment. By September 15 eight new pavilion wards of 40 beds each, 4 hospital corps barracks of 30 beds each, 2 subsistence buildings, and 6 semipermanent bungalows of 24 beds each had been completed. For the hospital camp 20 bungalows, 1 subsistence building and a bag room were also in operation. In May, 1918, the number of patients had increased to 1,300, of whom 500 were in the camp suffering from mumps, measles, scarlet fever, tonsillitis, etc. Steps were then taken to install heat, water, and sewerage facilities in the camp. At the end of the year the total number of patients was 1,100, with 600 contagious cases in the camp, which was now on a permanent basis and in good running order.

Owing to its geographical position in the naval district to which it belongs and to its accessibility to divisions of the fleet operating on the Atlantic coast, this hospital has received a large proportion of the sick from our cruising ships and has borne a heavy burden of responsibility, but all its obligations have been most worthily discharged and the commanding officer and staff are entitled to the highest praise for the skillful treatment they bestowed on the sick while engaged with problems of expansion, building construction, etc.

Paris Island, S. C.—One new building has been completed during the year and 5 others are now under way. When the work is completed this hospital should fulfill the requirements of the station unless a further increase of its personnel should be made. About 70 patients are under treatment at the hospital. Owing to the great congestion on the reservation, due to extensive building operations, the proper handling of patients is attended with some difficulty. It has been necessary occasionally to treat in outlying sick bays patients who would have been better off in the hospital proper.

Pearl Harbor, T. H.—The hospital has operated successfully since the receipt of its first patient, July 23, 1917. There remain to be provided quarters for sick officers and for contagious cases and an incinerator for garbage. n

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Pensacola, Fla.—The hospital was placed in commission on December 19, 1917, though work was still required and going on in connection with the isolation ward, quarters for members of the hospital corps, the mortuary building, the gatehouse, incinerators, roadways, etc. The hospital consists of 6 wards, each in a separate build-

ing, connected on their southern ends by a concrete road. Each ward accommodates comfortably 38 beds and is provided with dressing rooms, nurses' room, diet kitchen, lavatories, toilets, and from 2 to 8 quiet rooms. In addition to the wards there are quarters for nurses, for hospital corpsmen, for sick officers, for civilian employees. There is an administration building, a boiler house, mess halls, recreation room, post exchange, laundry, paint shop, carpenter shop, and garage. The buildings have excellent plumbing and sewerage, steam heat, electric light, and telephone connections. The commissary department has been operated in a most satisfactory manner. The work of the laundry has been of a high grade; the hospital is supplied

with a motor ambulance and a motor truck.

Portsmouth, N. H.—The rapid increase of the Navy in the spring of 1917 was reflected in the number of patients in this hospital, which increased from 47 on April 6 to 246 on May 28. The preponderance of the admissions in May, June, and July were acute febrile conditions, particularly communicable diseases. With the arrival of the first cases of measles and other infectious diseases a tent camp was established. Much inconvenience was caused at first from the fact that there was no latrine available for the camp for use of convalescents. Rough closed stools were made for each tent until a proper latrine with showers, baths, urinals, etc., could be erected. The present tent capacity of this hospital is 200. The hospital building proper is reserved for cases not of a strictly infectious nature. In September, 1917, work was begun on 2 sets of quarters for hospital corpsmen, a building for female nurses, 2 additional wards, a subsistence building, and a garage. In November, 1917, a new laboratory building was begun. These improvements increased the bed capacity of the hospital by 170, making, with the tentage, a grand total of 500. The total number of sick (active list) treated during the year was 1,975, of whom 1,542 were returned to duty, 88 continued to next year, 18 died, and the rest were invalided or transferred or discharged for change of diagnosis. The total number of infectious cases for the year was 576. There were 19 deaths and 7 transfers to the insane asylum. The following are the principal items of work done during the year: Closing in of solarium on third floor; installation of supplementary heating system in the basement; erection and equipment of 10 new buildings. The psychiatrist detailed for duty at the hospital has rendered important service.

Puget Sound, Wash.—A special effort has been made to give the medical officers recently appointed and on duty at the hospital, every opportunity for acquiring familiarity with the duties peculiar to the naval service. The medical, surgical, venereal, operating, X-ray, and laboratory services have been assigned in rotation. Instruction has been given in hospital corps drill and the simpler military formations. All have shown interest in the work. The detail of 15 female nurses to the hospital since June, 1917, has greatly added to the efficiency of the personnel. There being no quarters available for them in the yard, the nearest available rooms that could be rented were within a mile of the hospital and located over a moving picture and billard hall. These nurses have performed excellent service and the medical officer in command of the hospital, in recognition of their usefulness, has urgently recommended that adequate quarters,

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their successors.

Since June, 1917, classes for intensive training and instruction of members of the hospital corps assigned to this hospital have been organized. The instruction has been both practical and theoretical and the degree of interest shown and the marks attained have been a factor in determining the fitness of hospital corpsmen for advance-

ment in rating.

Installation of an ice and cold-storage plant in the main hospital has obviated the necessity of hauling ice from Bremerton and gives the greatest satisfaction. A small electric washing machine installed in the basement and used to wash gauze, muslin, and bandages already used has been very useful. The salvage system for all dressing and bandage material was instituted on August 1, 1917, and has made possible the reissue of 50 per cent of the material already used. A hospital corpsman especially detailed for the duty collects twice daily all dressing materials which have been used and discarded by the nurses in wards, dressing room and operating room. The material is sterilized, then carefully picked over and what is found suitable for further use is washed, dried, and subjected to fractional sterilization on three successive days. It is then dried, sorted, and

returned to the dressing rooms for further use.

The increase of patients due to the large increase of personnel in the yard made necessary the use of the main basement for ward purposes and in addition 25 hospital tents had to be set up in the grounds from April to September, 1917, when 5 new pavilion wards were completed. There were, also, completed at this time 3 dormitories for the hospital corps, 1 dormitory for civilian employees, a mess hall, and a kitchen. These enlarged facilities have made available the third floor of the main building for the reception of such female enlisted patients as are transferred here from the yard dispensary for hospital treatment. All the new temporary wards have one entrance where steps have been replaced by an inclined plane so that food carriages may have ready access to the building. The covered food carriages in use were designed at the hospital and built by the contractors. They give great satisfaction. The cafeteria system of messing, though only in operation for a short time, eliminates waste, permits considerable saving of food, and insures its delivery warm to the patients.

Washington, D. C.—During the past year a large amount of much needed repair work has been carried out in connection with the roofs of various buildings. Plumbing and fixtures have been generally renovated. Pointing up and plastering has been done in all rooms, hallways, wards, etc. A new Victor X-ray examining table has been installed and numerous changes and additions have been made to the equipment of the X-ray room, so that now this department of the hospital work is maintained at the highest possible standard. Many repairs, alterations, and improvements have been instituted in connection with the department of hydrotherapy, the dispensary, the garage, the eye and ear department, the genito-urinary department, etc. A recreation room, equipped with a pool table, comfortable chairs, tables, etc., has been established in the basement, and is well patronized by the men. The commissary department has been enlarged and rebuilt and it now has no superior, either in the matter of

construction, equipment, or administration. The latest type of hospital bed has been installed in the wards. The sick officers' quarters have been thoroughly overhauled. The quarters for the hospital corps and the contagious building have been thoroughly overhauled

and improved in many details.

Yokohama, Japan.—This institution continues to furnish unsurpassed opportunities for officers and men to convalesce from diseases and injuries acquired in the Philippines or in the trying climate of the Yangtze River Valley. At 1 a. m. October 1, 1917, a violent tornado wrought considerable damage to buildings and grounds. Twelve trees were uprooted and the roofing, sashes, shutters, and glass in the main building, the annex, the commanding officer's house, and the servants' quarters were destroyed or injured. Repairs were authorized by cable on learning of the event and cost 4,500 yen.

STATIONS BEYOND THE SEAS.

While the reports from abroad are among the most interesting that come to the bureau those from the war zone can not be published at this time, being largely confidential in their nature or else containing references to the work done in association with our allies. However it is appropriate to refer here to the excellent work done by two surgical operating teams, 12 persons in all, under Lieutenant Commander R. G. Lee Conte, Medical Corps, U. S. N. R. F., who responded to telegraphic request for assistance and traveled some 400 miles by first available conveyance to relieve the overworked and almost exhausted staff of the American Ambulance, Neuilly, June 2–8, on the occasion of a large and sudden increase in

patients flowing thither from the battle line.

We have ashore and abroad, directly connected with war service, 280 medical officers, 42 dental surgeons, and 1,000 members of the hospital corps. The duties of these officers and men differ widely. Some are serving at naval hospitals or dispensaries in England, Scotland, Ireland, France, and Gibraltar. Others are attached to American naval headquarters in London, Paris, and Rome. A considerable number are scattered throughout the British Isles, France, Italy, and points in the Mediterranean or the Atlantic, the naval air stations or radio stations. Serving with the marines at the front we have 47 medical officers and 7 dental officers, assisted by a suitable number of hospital corpsmen. Both in France and Great Britain there are other military units ashore whose precise duties it is inadvisable to describe, and each unit has its medical and dental officers and hospital corpsmen. Our Navy hospitals, proper, in France have an aggregate of 1,475 beds. Our hospitals in the British Isles can accommodate from 1,700 to 2,000 patients, but in one large hospital, capable of expansion to 825 beds, some of the beds must, at need, be available for patients from the British forces. We have, in addition, abroad temporary accommodations for 400 patients at the smaller stations. Female nurses are attached to the larger hospitals.

The personnel and the medical and surgical equipment abroad are being slowly and carefully but steadily increased to meet all possible needs of the Navy sick and wounded of our shore stations and of the

forces afloat.

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Sixth Regiment, Marine Corps, A. E. F.—The percentage of venereal diseases, 3.55 per cent for the quarter, is considered satisfactory, considering the added temptations to which the men were exposed, the use of alcoholic beverages being more prevalent and illicit intercourse far more open and prevalent in the large cities of France than in the United States. In this connection it might be of interest to state that a leading French gynecologist told the writer that immorality and venereal disease had increased greatly since the outbreak of the war, for the following reasons: Many women, whose husbands had been killed, became prostitutes for financial and other reasons. Many men returned from the front suffering from venereal disease, which they spread rapidly. Young girls, whose fathers and brothers had been killed, lost the restraining influences and discipline of home life and were led astray; while last but not least the control of licensed prostitution, which before the war had been strictly enforced by the "police de moeurs," was now less rigid. There is a great deal of clandestine prostitution in all of the large cities where troops are quartered, and this same physician estimated that 50 per cent of the young clandestine prostitutes are infected with syphilis in its active primary or secondary stages. It is the opinion of a well-known Paris genito-urinary specialist that all of the women who have been on the streets for one month or longer are infected with gonorrhea. That this condition is recognized by the Army authorities is shown by the vigorous steps that are being taken to control these diseases. The usual Navy routine of warnings, prophylaxis, and loss of pay for illness caused by these diseases is supplemented by court-martial for contracting venereal disease, semimonthly inspections, and frequent reports upon the venereal status of each command.

Dispensary, U. S. Naval Staff Headquarters, Paris.—The general health of officers and men has been good. The constant flow of men through this station has entailed physical examination and treatment of more men than are actually on duty here, and a majority of men with venereal disease have been retained for necessary treatment. Thus the percentage of venereal cases at present under treatment (about 12 per cent) conveys an exaggerated idea of the prevalence of this type of disease among the men assigned to duty here. The dispensary consists of three rooms, two being used as offices and examining rooms, the third as a pharmacy and storeroom. At present there is no sick-bay proper. Meanwhile cases are treated at the dispensary or at their dwellings, and those requiring prolonged treatment are sent to the Red Cross Hospital No. 2. Contagious cases are sent to the Pasteur Institute. The men live in various hotels throughout Paris. In the main the quarters are well lighted and ventilated and fairly clean, but are not satisfactorily heated. The men have sufficient food and clothing and seem well satisfied. Owing to their dissemination throughout the city it has been impossible to keep a close watch on the behavior of the men when not on duty. A hotel or other building should be provided where all men attached to the station could be quartered and fed. In such a building a room on the ground floor could serve for venereal prophylaxis and treatment.

U. S. Naval Railway Battery, No. 1, France.—Two cases of diphtheria occurring in this detachment were sent to hospital. Provi-

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sional quarantine of the camp was then instituted. Cultures were made from all the members of the battery and three possible carriers

were discovered and sent away.

Base 9, for forces based on Gibraltar.—The duty performed by the ships of this force has been mostly that of convoy and patrol. Liberty has been given in British, French and African ports. There have been no epidemics of importance, and except for the large proportion of venereal infections the health of the men has been very good. There is at the naval base a dispensary with a capacity of 19 patients, a drug room, and an office for the dental surgeon. From a medical standpoint the features at this base, which demand attention and rectification, are the venereal problem and the liquor problem. A limited and unsatisfactory method of segregation and a wholly inadequate system of examination of prostitutes is in force. An effort has been made with official backing to improve the venereal situation, but owing to local conditions satisfactory results are very difficult to obtain. The sale of alcoholic beverages of bad quality

and containing an inferior grade of spirits is universal.

Cavite, P. I.—Lieutenant Commander T. W. Reed, Medical Corps, United States Navy, in reporting on the sanitary condition of the receiving ship, Cavite, P. I., adverts to the effects upon our enlisted men of moderately long sojourn in the East. As is generally known, the East has its flotsam and jetsam made up of male ne'er-do-wells and adventurers and of females of low character, both native and "There have been many flagrant examples of physical and moral degeneracy and crime resulting from nothing else than association over a long period of years with American white trash and Filipino women. Those enlisted men who remain here for a long period of time—and there are many who have been here for four, five, and six years—become absolutely lawless and perverted to a degree which is shocking to the best American ideals. It is earnestly recommended that this subject be inquired into and steps taken to remove enlisted men from this station before they have sunk so deeply into the mire which exists in the Far East that they are ultimately a total loss, not only to the naval service but to humanity at large."

Guam, L. I.—The average complement of the station (Navy, marines, and insular force) for the past year has been 504 and the average number of sick days per man has been 11.2. One death occurred during the year from drowning; 17 cases were surveyed to the United States. Over 500 school children were treated for intestinal parasites, the oil of chenopodium being found more effective than santonin and thymol. Fifteen hundred cases of all kinds were treated at the native clinic. Of 106 operations performed, 71 were under general anesthesia, and 26 on members of the military person-The island of Guam with its total population of 14,500 persons has but one dental surgeon, though it could easily engage the whole time of at least three. The gynecological ward of Susana Hospital was completed and put in commission. It is a two-story structure, with operating room, hall and diet kitchen above, a library, a room for the native clinic and a room for eye, ear, nose, and throat work occupying the space below. The quarters formerly used for the native clinic has been converted into a locked ward, which serves as sleeping quarters for public women undergoing compulsory treat-

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ment. The naval cemetery has been well kept up during the year. In April two warrant officers and three men of the German navy, who lost their lives when H. M. S. Cormoran was blown up by its own officers and crew, were buried there with military honors. are 8 Navy nurses on duty at the hospital and they assist in the work of instructing the 12 native nurses, who are maintained by the Susana Hospital or by the special appropriations for lepers, etc. These native nurses, though handicapped by inability to speak English, poor education, and many other drawbacks, have proved useful in the community. The work of the small hospital for tuberculosis, with its male and female ward, which was opened last year, has been greatly hampered in its operations by lack of cooperation on the part of the natives, who entertain strong prejudices against the hospital form of treatment, do not voluntarily seek admission and will only enter it under compulsion. It has not been the policy to compel attendance at the hospital on the part of all tuberculosis cases, since this would often prove a hardship, but instruction in regard to the nature of the disease, its dangers and mode of transmission has been widely disseminated, and time and patience will doubtless demonstrate the usefulness of the building. The treatment of native children infested with parasites has been vigorously prosecuted, as mentioned above, but no marked or permanent improvement, except to specific individuals, can be expected so long as the natives are allowed to continue their insanitary practices in the matter of garbage disposal and until they can be persuaded or compelled to institute proper methods of sewage disposal. The cases of gangosa in the island now number 367. There are 4 lepers and 2 insane. There are 11 dressing stations in different parts of the island, 6 of which are conducted by members of the hospital corps of the Navy, while the balance are administered by native school-teachers, whose work has proved very satisfactory. Experiments have been conducted in the growing of various American vegetables from seeds received from the United States with only partial success, owing in part to the location of the ground, which has a seepage of salt from the nearby bay, in part to the poverty of the soil and the quality of the seed. There are at present, exclusive of temporary officers, 20 officers of the Navy and Marine Corps living in Agaña, the capital, in connection with the island government. There is no resident quarter in Agaña. Houses suitable to live in are crowded in among others less desirable and have no yards, gardens, or lawns. The only air space is in the square in front of the governor's residence. The ground is low, 6 or 7 feet above the sea level, and the high hills south of the town shut off the breeze in the hot season. The naval colony should be removed to the summits of the hills, which have an elevation of 160 to 180 feet and catch most of the breezes. They will be suitable for building sites when the negotiations now pending are completed, as the Government already owns part of the land and will soon be in possession of 50 acres covering all the crests. The climate of Guam is not bad but it has a depressing effect on most of the Americans and is hard on the children. A change from the dead air of the town at sea level, without breezes in the hot season, to the pure air and breezes of the plateaus would be beneficial. There should be a health resort at a still higher elevation, experience in India and the Philippines having shown that all white people living in the tropics require

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such a resort. An available site for such a resort is the plateau of Mount Tenjo. A road, which would require surfacing and repairs, leads to this site. The Government could build a large bungalow of the type appropriate to the tropics, which, leased to a competent manager at a nominal rent, would make possible visits for the week-

end or longer.

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First Provisional Brigade, U. S. Marine Corps, Port au Prince, Haiti—Health of troops.—During 1917 there were 676 admissions, averaging 13 per week. The total sick days numbered 3,452. The percentage of sick for the year averaged 4.642. It is interesting to contrast these figures with those of 1916, when, with a smaller number of men in Cape Haitien, there were 952 admissions, a weekly average of 18, and a percentage of sick of 9.42. The reasons ascribed for this very apparent improvement are: The withdrawal of the men from outlying posts; the sanitary measures instituted in the city by the Gendarmerie d'Haiti; and the relief of companies of long service in Haiti by new men.

Olongapo, P. I.—The sanitary condition of the naval station has been excellent during the past year, and excepting a few cases of

dengue no epidemics have occurred.

The sanitary condition of the town of Olongapo, outside of the naval station, is bad and with the exception of a few improvements about as reported a year ago. The "sanitary canal" back of the town has been completed and a few latrines built over it, but they are insufficient in number. A cut made through the Santa Rita road allowing the free flowing of the tide water which permits of two incinerators—one for the town and one for the naval station—is an improvement.

A 50 per cent reduction of the number of deaths on the reservation this year was probably due to the establishment of a small hospital which now contains 19 beds for adults and 16 cribs for babies. This hospital has been especially helpful in the care of

children suffering from intestinal troubles.

The monthly sanitary report for June, 1918, shows that 10,000 persons were vaccinated against smallpox, and there have been no cases of the disease, though for the week ending May 25, 1918, 152

cases of smallpox have been reported in Manila.

Tutuila, Samoa.—The health of officers and men has been excellent throughout the year. The total admissions and readmissions were 63; the total sick days, 891. Of these cases, 1 died, 2 were transferred, 1 was invalided from the service and 63 went to duty. The single death was the result of a gunshot wound inflicted with suicidal intent. The dental operations and treatments given during the year aggregated 707. The work made possible by the congressional appropriation for an increased water supply will be completed toward the end of the year 1918. The need of a laundry is keenly felt, as the local conditions, the habits of the natives, the available water make the washing of clothes, as done by the native women, a source of skin diseases. It is estimated that \$7,000 would suffice for this purpose. Leprosy, which is common in other islands of this group, has not been present in American Samoa until this year, when one case was diagnosed here. As there are no provisions at Tutuila for the care of lepers arrangements were made to have the patient transferred to the leper colony, Molokai, T. H., but the authorities declined to receive him. After prolonged correspondence the authorities of Western Samoa agreed to receive him and he was transferred to the leper colony. The expense of maintenance will be borne by the island government for the present. In view of the man's history and of the fact that he had only been a resident of American Samoa for 15 months and because this disease has hitherto been absent in American Samoa, an unsuccessful attempt was made to have the Government of Western Samoa admit responsibility and assume the expense of maintenance of this patient. It would seem advisable to take legal measures to permit the deportation of aliens developing leprosy within a stated period after their arrival in American Samoa, having in view especially the settlers coming from Western Samoa, where leprosy is prevalent. If this is not done our Government will in time be burdened with the care of lepers born under a foreign flag and owing allegiance to it. The general health of the natives continues good, but, in spite of the paternal and benevolent efforts of the naval authorities here, they continue to live as they have in the past, with little regard to personal and general hygiene, and neither instruction nor entreaty looking to an improvement seem to do any good. The infant mortality is high and due principally to the fact that upon being weaned babies are put immediately on a diet of bananas and taro. It is hard to persuade the mothers that this practice is bad and the only way to change it is by the practical demonstration of the value of other methods. This is being attempted and there is at the hospital at present a woman who has lost five infants. She is being taught to modify milk for the use of her sixth child and the infant is thriving on modified milk and under the careful regimen under which it is being raised. The most valuable agent for reforming the habits of the people and for improving conditions of life among them is the education of native nurses. A school for them was opened in February, 1914, with three pupils, who graduated in 1916 and were assigned to duty in the eastern and western districts and at the Samoan Hospital, with alternate periods of service at these different posts. The second class of trained native women, consisting of four members, was graduated in June, 1918. Seven women are now under training at the school, two of whom will graduate next year. During the year the patients treated at the Samoan Hospital and its branch dispensaries numbered 15,529. Operations were required in 311 cases. The total deaths for the year were 61. The visiting nurses administered 3,736 treatments in the various districts. In November, 1910, the commandant ordered that all medical and surgical treatment given by medical officers of the Navy to the natives of American Samoa should be without charge. In April, 1911, the Navy Department authorized the erection of the present Samoan Hospital, provided that no part of the cost of the maintenance should be charged against any naval appropriation. The hospital, consisting of a central administration building, operating room, and sterilizing room, was erected at the charges of the insular government and each district erected a large house of native design and construction for the accommodation of patients. Since these buildings were put up the Navy Department erected a two-room dormitory for the hospital corpsmen on duty there. The expenses incident to free treatment in this institution and its branch dispensaries have been met by the proceeds from

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bazaars and fairs, but the revenue from this source was insufficient and so in February, 1914, a drug store was erected, which in two years needed to be considerably enlarged. The revenue from this establishment is ample for the expenses of the hospital. The drug store has become a center of social intercourse for the natives, who come by the hundreds in the afternoon to enjoy the drinks from the soda fountain and gossip about neighborhood and island affairs. The gross receipts from the drug store in 1914 were \$584. For the

calendar year 1917 the cash taken in amounted to \$15,265.49.

Virgin Islands of the United States.—Captain C. S. Butler, Medical Corps, United States Navy, reports the entire reorganization of the health department of the islands, the largest of the civil departments as regards personnel and expenditure of funds. This was one of the first duties which confronted our medical officers when the islands passed from the control of Denmark to that of the United States. The difficulty of the work was enhanced by the lack of mortality statistics, records and data needed as a basis for recommendations, appropriations and reorganization. Thanks to Commander D. C. Crowell, Pay Corps, United States Navy, and Lieut. R. L. V. Stratton, Pay Corps, United States Navy, the entire accounting system of the hospitals and other institutions under the cognizance of the health department has been revised and improved. The lack of a trained nursing force to second the efforts of physicians in the professional care of the civilian sick was seriously felt at first, but training schools have now been established in the municipal hospitals of St. Thomas, Frederiksted and Christiansted, supervised by members of the navy nurse corps (female), who deserve great credit for their patient, efficient efforts in this connection. It is proposed to establish an obstetric service and an obstetric ward in each of the municipal hospitals where this has not already been done. The sanitary work of the local governments is conducted in a measure by civilian physicians, but medical officers of the Navy, hospital corpsmen and Navy nurses fully participate in all sanitary work carried on in the islands. The municipal hospital service of St. Thomas and St. John has been conducted at an expense of 169,302 francs, which includes all expenses except certain fees for death certificates and funeral expenses of the poor. This sum has covered 34,727 sick days, at an average per diem subsistence rate of 32 cents. This hospital service has afforded relief to 39 per cent of the entire population. The expenses of the municipal hospital service of Frederiksted and Santa Cruz, from April, 1917, to July, 1918, amounted to 118,180 francs, covering 23,701 sick days, at an average per diem cost of 37.6 cents. Other government institutions are the Invalid Hospital, the Insane Asylum and the Leper Asylum. The sanitary, hospital, and educational work of the naval personnel has been in addition to their duties in caring for the sick of the naval station proper.

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Marine Barracks, Virgin Islands of the United States.—The main barracks are at Charlotte Amalie, with subsidiary posts at Christiansted, Mosquito Bay, East Point. The general health of the command has been good. Towards the close of the year an epidemic of dengue has been in progress and about half the officers and men have been infected. No serious after results have been noted. While in general the sanitary arrangements are primitive and simple, constant supervision

and minor improvements have rendered the quarters occupied reasonably suitable. Wherever possible, buildings have been screened and screens have been put on all cisterns used to collect rain water for drinking purposes, thus eliminating to a large extent the presence of mosquito larvae. Systematic instruction in regard to venereal disease and its dangers has been maintained. Athletics have been encouraged in every way. Baseball, football, basket ball, and swimming are very generally indulged in by the men.

NAVY YARDS, RECEIVING SHIPS, TRAINING STATIONS, ETC.

U. S. NAVAL ACADEMY, ANNAPOLIS, MD.—The following statistics represent the work done in the medical department compared with that of the previous year:

Number of admissions, all cases Football, midshipmen only: Admissions and readmissions	1917. - 2, 552	1916. 1, 605
Admissions and readmissionsSick days in sick quartersSick days in hospital		84
Sick days in hospital	- 90	151
Sick days in hospitalNumber of vaccinations smallney	215	474
Number of vaccinations, smallpox	1,540	712
House visits made by medical affine	1,487	929
Average number daily house visite	- 5, 463	4,917
Office visits at dispense	. 15	13.5
Confinement cases attended by and it is	. 3, 575	3, 833
Number of prescriptions filled	. 43	41
Average number filled per day	7,052	8, 392
Physical examinations for civil coming	19	23
Physical examinations of midshipmen	105	74
Physical examinations of candidates Preliminary physical examinations condidates	1, 134	828
Preliminary physical examinations, candidates	823	676
	105	43

There has been an expansion at the Naval Academy during the year to accommodate the increased personnel due to a greater number of midshipmen (1,440), and the presence of classes of reserve officers, totaling 450 at one time, for intensive training. Twelve hundred midshipmen are quartered in Bancroft Hall and 240 in the barracks. This method of housing them is not satisfactory, as the general plan is to assign four to the rooms of Bancroft Hall which were designed for two, and at the barracks the living space is divided into dormitories. In these two systems of housing there is ample air space, but the crowded conditions make it very difficult to deal with contagious disease, especially preventing the spread of contagion, for many more contacts have to be dealt with. This has been demonstrated during the present academic year when nearly all the exanthematous diseases have made their appearance on the station. Fortunately the one which so far has been most prevalent is German measles; it would be much more serious if the contagion of scarlet fever or diphtheria had been fought.

The artificial lighting of Bancroft Hall has been a problem ever since the building has been occupied, and three changes have been made in the system in trying to get the best and to keep up with progress in the art and science of electric lighting. The system which is now being installed, the principle being semidirect lighting, is thought to be the last word on the subject, having been determined enters in after much experimenting by Commander G. B. Trible, Medical

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Corps, United States Navy, with both lights and reflecting surfaces. The painting of the rooms is white drop ceiling and light buff walls, matt surface, with a dark green dado about 20 inches above the floor for wear and tear. The light is from a Mazda C, 150-watt bulb; the bowl of the fixture is of Sudan glass. The diffusion of light thus produced more nearly approaches that of sunlight than by any other known system, and is therefore more acceptable to the eyes.

The drinking water is obtained from two artesian wells bored to the depth of 600 feet. The supply is 550,000 gallons daily. The water at the source contains too much iron to be agreeably potable. From the wells it is pumped into settling tanks, where, by oxidation and sedimentation, the iron salts are largely precipitated. From the settling tanks the water is pumped to the power house, where it is passed through a filtration of sand and gravel. The water supplied to Bancroft Hall is again filtered in the refrigerating room before being piped as cold drinking water to the bubbling fountains on the different floors of the hall. In the basement of Bancroft Hall, where the bubbling fountains have not been installed, the drinking cups for the mess attendants are kept submerged in a solution of formalin. This method is also carried out at the barracks for the midshipmen quartered there. It has been recommended that the latest improvement of the drinking fountain be installed—that is, the inclined jet.

Feeding 1,440 midshipmen, 450 reserve officers, and 200 mess attendants is a problem of no mean proportions; especially when so many factors have to be considered, particularly the high cost of living in its effects upon a low mess bill. Good food from the soup to the dessert is demanded, but if the mess bill is higher for the month, there are a good many to ask the reason why. That the food is ample is shown by the increased weight of the midshipmen, the average gain being about 10 pounds in the first six months at the academy; that is, a class of 200 will take on a ton of flesh. The menus for the coming week are made out by the commissary officer and submitted to the superintendent, commandant, and senior medical officer, so that any change desired or recommended can be made. dietary, variety and the number of calories are taken into consideration. As the midshipmen are growing, developing, and working both mind and body at the same time, the number of heat units per day is about 4,500, a very liberal allowance. On feast days special menus are served.

All beef and mutton is bought of wholesale houses in Baltimore, and is Government inspected, and again inspected by a medical officer of the Naval Academy. The cold storage now being installed is up to date, and, by proper ventilation, molds, which are often of a pathogenic nature, are kept from forming. The pork is obtained from hogs raised on the Government farm. The hogs are given anticholera serum and slaughtered under direction of an official of the Bureau of Animal Industry, Department of Agriculture. The garbage from Bancroft Hall is used for feeding the hogs. It is a matter of interest that formerly a contractor was paid to remove the garbage, but now this liability is converted into a resource. The bread is made and baked in a sanitary bakery; the dough is mixed and worked by an electric mixer, so no sweat of the brow enters into it. The kitchen and all spaces which have to do with

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the handling and preparation of food are screened. The room for the serving of meat is doubly screened. The range in the kitchen is under a metal hood, from which ventilators lead and through which air is forced by electric fans to the top of the building, so there are no offensive odors in the living quarters. There are machines for slicing meat, dicing vegetables, etc. The most important machine is the Victor dishwashing machine, which washes articles thoroughly and sterilizes them, and they are dried by their own heat, thus eliminating the questionable dish towel. Oakite, a mineral compound, has been substituted for soap, and seems to be superior in several respects. About 15,000 pieces can be washed in an hour. It is a very compact machine, and could well be installed on board ship. The 200 mess attendants are now enlisted or enrolled. They are inspected for venereal disease, tuberculosis, etc. It is also seen that their hands are clean and finger nails short and clean.

The milk is furnished by the Naval Academy dairy, which is under the management of the commissary officer. The herd of Holstein cows, now numbering over 200, and the methods and equipment of the dairy are under the management of the Bureau of Animal Industry, Department of Agriculture. The dairy is regularly inspected and scored by officials of this bureau and the herd tested for the presence of tuberculosis and treated for such diseases as may appear, as garget, contagious abortion, etc. The bacterial count of the milk rarely reaches as much as 5,000 per cubic centimeter; as 10,000 per cubic centimeter is allowed as the minimum for certified milk and 100,000 for class A milk in New York City, it is evident that very pure milk is furnished. The effect of such milk has been wonderful in eliminating gastro-intestinal troubles among midshipmen and is a preventive against an occurrence of tuberculosis and typhoid fever, for, although the midshipmen are protected by antityphoid inoculation, the civilians of the station are not, and there has not been a case of typhoid fever on the station since December, 1910. About 320 gallons of milk are now being furnished daily. Fifteen minutes after the milk is drawn its temperature is reduced to 35°. It is then transported to the Naval Academy and put in the butter and milk room, the temperature of which is kept at cold-storage degree, so the germs are not allowed to multiply.

The m tter of personal hygiene is taken up the day the candidate is examined by the medical board. He is required to be clean when examined. The necessary dental work, cleaning, inlays, etc., has to be performed before entrance. Physiques have to meet standard requirements. As soon as possible after entering he is measured by a universal dynamometer, under the supervision of a medical officer, weak groups of muscles are noted on his chart, and he is required to develop them before he is allowed to enter strenuous athletics, being put on the "weak squad" for this purpose. All midshipmen, whether weak or strong, are given a course in a modified Swedish-movement drill during the first summer at the academy, which insures general development. Swimming is taught at this D time, and no midshipman is allowed to graduate unless he qualifies me in swimming, which means swimming with three different strokes, attaining a certain standard of speed, distance, and endurance.

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As soon as a midshipman is appointed he is vaccinated against smallpox and is given inoculation against typhoid and paratyphoid

A and B, so these diseases are eliminated. There has not been a case of typhoid in eight years. The midshipmen are given talks on venereal diseases, the importance of continence and clean living, etc. The occurrence of venereal disease among them is very rare, not more than eight cases in as many years. It is possible that some such cases may be concealed and treated by the civilian physicians in the city, but every midshipman is examined annually, and besides very evident complications of these diseases could not be concealed, and

these have rarely occurred here.

Great care is taken to guard against the introduction and spread of contagious diseases. Medical officers serving here are impressed with the necessity of recognizing these diseases when first seen, so that there may be prompt isolation and transfer to the hospital. In the milder exanthemata, as German measles and mumps, if there is only one or a few foci of infection the roommates as contacts are also sent to the hospital to remain during the period of incubation. If there are many foci, there is a daily inspection of contacts. In the more severe diseases, as measles and scarlet fever, etc., all contacts are transferred to the hospital and remain during the incubation period. The rooms of those having such diseases are fumigated and bedding sterilized.

There are many other regulations which are made for the welfare of the midshipmen. The windows of their rooms are required to be open when they are absent. The temperature of the buildings is regulated as well as possible. A dust-laying preparation is used by the corridor sweepers. The section rooms must be ventilated, and desks are so arranged that the light falls properly. When on the rifle range it is required that the midshipmen's ears be protected by putting cotton lightly in them or using one of the patented forms of ear protectors. The uniform of the day is prescribed, so a midshipman has to wear an overcoat and rubber shoes whether he will or no. So it seems that no measure, however small, is neglected to keep

these Government wards in good health, and the results are generally satisfactory.

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U. S. NAVAL DISPENSARY, WASHINGTON, D. C.—The clientèle of the dispensary since war was declared has expanded along with other activities of the Navy. At the present time there are probably over 8,000 people who receive professional care from this source. Some of those seen have really no official status, yet are dependents of officers and men now departed, and it is impossible to refuse them treatment. As high as 125 patients have been treated at the dispensary in a single day, hence the work has been carried on under the most adverse conditions. As it was impossible to secure a suitable building to relieve the congestion, Lieutenant Commander G. B. Trible, Medical Corps, United States Navy, the eye specialist, was transferred from the dispensary to the naval hospital. lieved the conditions to some extent, but the change has not been entirely satisfactory. The hospital is so far distant from the Navy Department that much time is lost by those needing special treatment. Likewise, much confusion is experienced in keeping the health records of those patients who come under Lieut. Commander Trible's care.

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The cost of upkeep of the two automobiles used by the attending surgeons from July 1, 1917, to June 30, 1918, was \$1,086.86, an amount which might seem excessive, yet without these cars the outside work could not have been done. Requisition for a third automobile has been made and approved by the bureau for the use of the third attending surgeon, who will, as far as possible, devote his entire time to the care of the reservists, who number about 3,800,

exclusive of those on duty at the navy yard.

Reservists requiring hospital treatment are sent to the Georgetown University Hospital. This arrangement has been perfectly satisfactory, yet this only holds for noncontagious diseases. For the coming year arrangements have been made to send cases of measles and diphtheria to the Providence Hospital. The care of scarlet fever patients (female) will prove a serious problem, as only the Garfield Hospital will care for that type of disease, the facilities being limited. During the winter months it is almost impossible, at times, to transfer scarlet fever patients to this hospital. Of course, all male reservists with contagious and venereal diseases are sent to the Naval Hospital, Washington, D. C.

The expenditures for the year ending June 30, 1918, were:

Don't for any in	
Rent for premises	\$1, 200, 00
401	co co
Electric current and gas	100.00
Ice	169.45
Ramoval of mulhich	26. 14
Removal of rubbish	60.00
Laundry, coats	21, 90
Automobile accessories and renairs	1 000 00
Trupping paper	110 000
Surgeons' necessaries	140. 27
Medicines on Cupply Table Form "P"	929.57
Medicines on Supply Table Form "B" and Form 4	2, 311, 60
Dental supplies	170.98
r errodicars	67, 00
vaccines	07 70
Costumers, oak, 6 for Bureau Medicine and Surgery	97. 70
Hand register machine for Description and Surgery	22. 50
Hand register machine, for Bureau Medicine and Surgery	2, 70
Glycerine soap	40 44
Eureka cabinet section	38. 50
	00.00

These figures include the maintenance of the two automobiles. In view of war conditions, it is considered that the amount expended is not excessive, and that due economy has been observed.

Medical attendance furnished to officers and enlisted men on the active and retired lists and to their families and to the Naval Reserve Force was as follows:

From July 1, 1917, to June 30, 1918, 3 members of the dispensary staff paid 4,846 house calls and gave 4,275 consultations or treatments. During the same period 2 other members of the dispensary force, with 4 medical officers temporarily on duty there, attended to office consultations and house calls to the number of 11,879. To the above must be added 110 "bakings and electrical treatments;" cowpox vaccinations, 95; typhoid prophylaxes, 431. The eye, ear, nose, and throat work involved the treatment of 8,225 cases.

There were 1,320 dental treatments given during the year.

By reason of women being enrolled in the Naval Reserve Force for clerical duty, it became necessary to add to the dispensary a new department under the charge of Lieutenant (Junior Grade) J. J. Mundell, Medical Corps, U. S. N. R. F. This includes diseases of

women and obstetrical work, the latter confined to the wives of officers and men, both on the active and retired lists. He has attended to 862 office and house calls, performed 13 major operations, and seen

26 obstetrical cases.

Nineteen thousand five hundred prescriptions have been compounded promptly and efficiently, as compared with 13,696 during the preceding year. The Naval Reserve Force has made the greatest demands for medical and surgical supplies, and especially upon the time of the officers serving at the dispensary. Two hospital corpsmen are indispensable for the transaction of clerical work. One man devotes his whole time to the health records. The sick list averages 100 names daily.

Navy yard, Washington, D. C.—The sanitary condition has been good throughout the year. In addition to the usual enlisted personnel there are now upward of 250 women serving in the capacity of yeomen in this yard. They live in widely scattered sections of the District and entail three or four professional calls daily outside the yard. The number of civil employees working in the yard has increased from 4,000 to 8,200. Treatments for accident or injury and

redressings have amounted to 7,934.

Indianhead Proving Ground, Md.—In view of the close relation between the civilian settlement and the proving ground and of the lack of any sanitary control of the district, it was recommended by the sanitary inspector that the Bureau of Medicine and Surgery take up with the Department of Health of Maryland the question of designating the medical officer on duty as a State and county health officer with power to enforce State health laws. These laws are very comprehensive and are ample. This procedure has been followed by the State of Virginia at the Marine Barracks, Quantico, and at the Hampton Roads naval base. The sanitary advisers of the seventh and thirteenth naval districts have received State authority from Florida and Washington, and in all of these instances the results have been satisfactory.

Pending completion of sewer connections, the Westinghouse-Church Co. has installed the Kaustine system of sewage disposal. This consists of a pit 4 by 6 feet and about 6 feet deep, which is filled with cinders; in the upper part of the pit is installed a cylindrical tank which receives the toilet-seat washings. Fluids escape into the soakage pit, the solid residue being retained in the tank and treated with a caustic from a small tank. The method is said to be satisfac-

tory and is being installed by other contractors.

The medical officers on duty at the proving ground have effected marked improvement in the sanitary condition of the neighborhood. The campaign against malaria has been eminently successful through the concerted effort made to exterminate mosquitoes. The so-called "niter cake," or acid sulphate of soda, a cheap local by-product, has proved of great value when used to prevent the breeding of larvæ in marshes and still waters. This substance should be finely divided and sprinkled over the surface of the water, or, better still, sprayed in concentrated solution when the surface of the water is agitated.

Sick Quarters, Marine Barracks, Quantico, Va.—The sick quarters of the Marine Barracks at Quantico, Va., was opened for patients on August 13, 1917. It serves as the base hospital for the various Marine organizations forming or training at Quantico. At present

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e for new J. J. ses of it consists of a dozen single-story frame structures grouped together near the banks of the Potomac River in the southeasterly portion of the reservation. These buildings for the sick are well separated from those used for barrack purposes, and their general location in reference to the topography of the camp from a sanitary point of view is advantageous.

There are five general wards and one ward for sick officers, each measuring approximately 100x20 feet, which collectively afford accommodation under normal conditions for about 150 sick. This permits over 65 square feet of floor area and 800 cubic feet of air space per individual. The wards are double floored, with sheathed walls, and the ceilings are lined with plaster board. Between outer and inner layers on all sides are strips of heavy weather paper, which provide further protection. An administration building, hospital corps dormitories, galley and mess hall, medical storerooms, and ambulance shed comprise the additional structures.

The water supply is derived from deep wells and is piped from the reservoir for the camp. The quality is considered excellent, but in quantity there has been at times a deficiency, and the pressure is never entirely adequate for the provision made in case of fire. The lavatories of each ward contain sinks, showers, urinals, and water-closets. Hot water is provided by heaters, one in each of the washrooms. The hot-water tank from the heater is connected with all sinks and showers, and together with the heater, serves to warm the lavatory for bathing in cold weather. The waste and soil pipes from the hospital discharge into the main sewer from the barracks, which in turn empties into the Potomac River. Garbage is burned in an incinerator near the galley and noncombustible refuse is removed daily by wagon.

FIRST NAVAL DISTRICT.

Navy yard, Boston, Mass.—The health of officers and men attached to this station has been excellent. There have been no epidemics. The usual sanitary inspections of all premises in the yard have been carried out and many important permanent improvements have been made. The total number of civilian employees to whom medical or surgical aid has been rendered is 5,373. In 4,727 cases the disability involved no loss of time from work. The average number of days of absence in those who lost time from work was 19,30.

United States Naval Aviation Detachment, Cambridge, Mass.—The United States Naval Aviation Detachment occupies the building known as the Walker Memorial, one of a group of buildings of the Massachusetts Institute of Technology facing the Charles River. The building was primarily intended to be used as a dining hall and gymnasium and is well lighted and ventilated.

The food is prepared and served from the cafeteria under the management of the Massachusetts Institute of Technology. The men are given their subsistence and allowed to buy their food from the cafeteria. They eat in the main dining room. Both the Army and Navy student aviators are served by the café. Their food is well prepared and of good quality.

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Ten minutes of calisthenics before breakfast, one hour of drill, and one hour of calisthenics in the afternoon are given daily, Satur-

day afternoons and Sundays excepted. The bowling alleys (4)

in the basement are available for use by the men.

The sick bay contains six beds. It is seldom that they are all occupied. Only the minor cases of sickness, rhinitis, vaccinia, sprains, antityphoid inoculations, etc., are treated here. When the patient is considered sufficient ill or likely to become very ill he is immediately transferred to the United States Naval Hospital, Chelsea, Mass. No death or serious illness has occurred at this station.

The medical staff of this station consists of three officers, one of whom is attached to the Harvard Radio School, with additional duty here in experimental psychomotor work. There are five hospital

corpsmen on duty.

U. S. Naval Radio School, Harvard University.—The school is located at Cambridge, Mass., in the center of population of a metropolitan district. When first organized the school occupied a part of one of the college buildings. It has gradually extended until half a dozen buildings, including the Hemingway Gymnasium, are used for classrooms and barracks. As the school now consists of 3,400 officers and men, a large number of them live in boarding houses, rendering policing and medical supervision difficult. The men come from various training schools and camps and, to reduce the danger of contagious disease, they are kept in detention for a week or longer on arrival, as long as the conduct of the classes is not interfered with by so doing. Some 2,600 men are assigned to barracks, but many of them live in boarding houses in Cambridge and vicinity. These men have been formed into special companies, and their allotted places in barracks have been filled. Their addresses are noted, and the men are informed of the rules by which they must regulate Their quarters will be systematically inspected by their conduct. a medical officer and another officer appointed by the commanding officer, and rooms which are found undesirable will have to be given up. Messing is conducted under a contract with the Harvard authorities. Ample time is allowed for meals and 1,200 men can be accommodated at a sitting.

The sick-bay first operated was inadequate, having only 20 beds. Winthrop Hall has now been secured for the purpose. It is a fourstory building and will accommodate 150 patients. A small surgical dressing room, diet kitchen, necessary bathing facilities, etc., have been installed. The venereal problem is here as elsewhere difficult of solution. There are no known houses of prostitution in Cambridge and they are not common in Boston, but street soliciting exists to a slight extent in Cambridge and is extremely prevalent in Boston. Since the war a new and not strictly professional type of streetwalker has appeared. It comprises young girls at the romantic age. They are seen in large numbers at the moving-picture shows, in amusement parks, and on the streets of shopping and factory districts. These girls are fascinated by the uniform and, though many come from respectable homes and have by no means reached the outcast stage, their relations with our men are frequent and, of course, a certain percentage of the relationship is immoral. Systematic instruction on the dangers of venereal disease has been carried out, and the incidence of venereal disease has fortunately been low. This is due to (1) relatively good environment, (2) diversion of energy

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by hard study, (3) the work of the local committee on health and recreation. The work of this committee has been by far the most important of the various agencies. Dances and social functions have been arranged and, better still, a system has been devised whereby the men have been introduced into the homes of the citizens of the neighborhood. Over 1,000 men have been definitely placed as "friends of the family," and practically the entire personnel has been given an opportunity to make friends among the citizens, the great bulk of the men accepting with eagerness. Over 1,000 invitations had to be refused on Thanksgiving Day because the men were already engaged. Many churches have done good work in opening up their houses and those of the members of their congregations to the men of the Radio School. Chaplain W. B. Ayers, United States Navy, has fitted out a library and reading room, using the entire old building of the Theological Library.

U. S. S. Southerey.—As in the past the use of this vessel for the detention of prisoners is unfavorably commented on by medical

officers serving on her.

SECOND NAVAL DISTRICT.

The medical aid to the commandant, Second Naval District, reports that during the calendar year ending 1917 the total number of men examined at Newport was 6,707, of whom 5,391 were accepted, 1,316 rejected. Besides recruiting work the examining surgeons have examined aviators, assistant paymasters, pay clerks, ensigns, and warrant grades. As soon as the war expansion began a dispensary was established in the State armory in connection with the reserve personnel, Lieutenant Commander W. D. Owens, Medical Corps, United States Navy, being the senior medical officer on the staff at that His services were invaluable. His work was continued by Lieutenant W. L. Rathbun, Medical Corps, U. S. N. R. F., whose work has been painstaking and efficient. Cloyne Camp was completed and occupied in June, 1917. The location is very satisfactory. The sick bay in this camp is designed merely to care for patients with comparatively trivial ailments, with a view to relieving the congestion at the naval hospital. The dispensary of the section base is at the armory. It attends to the needs of patrol boats, material section, and supply section. The district is now provided with adequate dental

In view of the number of men that have been received from all parts of the country, without any period of detention for observation, it is considered that the district has been unusually fortunate. The most serious menace was a diphtheria epidemic in Newport last summer. The health authorities allowed a week to elapse before information was given to the medical officers of the Army and Navy that an epidemic had occurred. It was definitely proved that the infection came from ice-cream and by chance the firm through which it was disseminated did not happen to have the ice-cream contract for the current quarter. The few cases that occurred among the reservists were those over whom the medical department had least supervision, men scattered about the town, belonging to the patrol boats, or to the

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matériel section.

This epidemic emphasized the need of Government control of the local health conditions in the vicinity of a large naval station or cantonment. At the time when this epidemic prevailed there were about 15,000 men of the Army and Navy stationed in this vicinity. An endeavor was made to cooperate with the local health authorities to help stamp out the epidemic and the usual quarantine restrictions were in force. An epidemic of diphtheria also occurred this fall at New London, mostly among children, in contrast to the epidemic in Newport, which was principally among adults. Since the winter months began diphtheria has again appeared in Newport, not to a great extent but virulent in character. A considerable number of scarlet fever cases have been reported in Newport, but no infection has occurred among our men. The diseases that have caused most concern, especially at the beginning of the organization before the proper quarters had been provided, were measles, pneumonia, and cerebro-spinal meningitis. Thanks to the cooperation of the American Red Cross, which aided us promptly with a supply of woolen blankets, sweaters, etc., there was no occasion for exposure from insufficient clothing. When cerebro-spinal meningitis appeared, Dr. Simon Flexner, of the Rockefeller Institute, by invitation of the Bureau of Medicine and Surgery, came to Newport to instruct us as to what could be done in case of future epidemics and to give the medical officers the benefit of the most recent work at the Rockefeller Institute. Major E. K. Dunham, of the Army Reserve Corps, was ordered to the naval hospital, where he examined the cultures from several suspected carriers, all of which proved to be negative. After consultation with the medical officer in command of the naval hospital it was planned to provide a laboratory, with complete equipment for the examination of the many carriers that were anticipated should an epidemic occur during the winter months.

There is some overcrowding on the smaller patrol boats, but it can not well be obviated. In spite of it the health of the personnel has been good. In general the work of the reserve medical officers has been of a high grade and while some have shown exceptional ability for military service all have been animated by a desire to do their full

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Newport Section, Naval Reserve Force.—In July, 1917, a mild diphtheria epidemic preceded by an epidemic of septic sore throat occurred in Jamestown. Within a week cases developed in Newport. and ran up to several hundred. They were mild in type. Only 12 cases developed in the Naval Reserve Force, thanks to prompt quarantine measures, the boiling of milk, and the exclusion of ice-cream

A large percentage of the cases of gonorrheal infection was among the recruits when they first reported for duty, the infection having occurred between the time of enrollment and the call to active service. Considering how much one hears of the temptations which beset a young man in the naval service it is interesting to note the fact that men enrolled, then went home and contracted venereal disease during the inactive period when they were waiting a summons to the colors. This seems to reflect on the local influences and surroundings of the home towns and on individual stamina rather than on the Navy. confirms previous observations and lays fresh emphasis on the absolute necessity for reform in civilian communities if permanent change for the better is to be effected among the men in uniform. Here the

men received the usual lectures and comprehensive instruction on personal hygiene, venereal disease, and the importance of sexual continence. The camp on Cloyne Field was completed in August, 1917, and consisted of 20 barracks, 10 mess halls, 7 latrines, an administration building, sick bay, storehouses, heating plant, etc. The sick bay has a ward $77\frac{1}{2}$ by 25 feet which allows 775 cubic feet of air and 80.7 square feet of floor space for each of the 24 patients. The health of the men serving on the patrol boats has been good notwithstanding the fact that some overcrowding on them was unavoidable owing to their being in the main converted pleasure boats not designed for war purposes. The weather during the winter was the severest that has been known in this section for 50 years. Sanitary inspections of the patrol boats were systematically made and their personnel received lectures in first aid. In the camp sanitary squads operated continuously with gratifying results. The food has been of good quality and well prepared, but cooking had to be done by electricity at a relatively high cost. Dish washing was by hand and because of the scarcity of hot water it was often impossible to scald the dishes. The men on guard are furnished with a "full bag," which includes "oilers" and rubber boots, and the men in the patrol boats are outfitted with the special nonleakable suits, including helmets. All of the men are furnished with sweaters. Owing to the scarcity of material the texture and durability of the clothing are not as good as formerly.

Block Island Section.—Particular attention has been paid to the routine inspection of small coast patrol vessels. Those of modern construction and averaging 15 men as complement have adequate heating, lighting, and ventilating facilities, with water-closets, urinals, etc. On the other hand, converted vessels, originally intended for coastwise fishing, have required constant supervision in regard to cleanliness of toilets, mattresses, cooking utensils, garbage, etc.

The medical headquarters for this section has been located in a rented building, originally a private residence with a basement, 10 rooms and a bath, lit by kerosene lamps, and heated by steam. It is easily accessible from the administration building and close to the building occupied as a residence by the personnel of the medical department. Cases requiring protracted medical care are transferred

to the hospital, Newport.

New Bedford Section.—This section was organized July 1, 1917. and up to December 16 headquarters and medical department were located in the customhouse. Subsistence was furnished by the Government and men lived either at home or in boarding houses, except those on patrol duty or in the guard detail. The guard detail occupied quarters at the local Y. M. C. A., and later at the Yacht Club. The fact that the men worked in such widely scattered places created unusual conditions and necessitated a modification of the ordinary methods of medical procedure. Personal inspection of the men was almost impossible and the lack of personal contact not only interfered with treatment but also with imparting instruction on health and hygiene and with giving the advice which the new men required. The supervision of the food of the men eating in boarding houses and restaurants was impossible. The food supplied to the patrol boats was excellent and varied. Food inspections were difficult. A general sanitary inspection of the boats was made

twice a month. The medical supplies furnished were adequate and satisfactory in every way. There was no sick bay where patients could be kept, so trivial and minor cases were treated in their rooms or the dormitory, and those requiring hospital treatment were transferred to the Naval Hospital, Newport, R. I. A contract was made through the United States Public Health Service with the local hospital for the treatment of such serious cases, unable to endure transportation, as might occur. Happily it has not been necessary to make use of this contract. In the month of July it was found that certain sewer pipes emptied into the waters around the State Pier where patrol boats anchored. As the water here was practically stagnant it proved an undesirable anchorage. With the aid of the New Bedford health commission an effort was made to have the flow diverted to another point on the river, but this as well as the construction of a septic tank was found impracticable. This, among other things, led to the abandonment of the Emigration Building, and transfer to Fairhaven, Mass. The transfer to Fairhaven was made on December 16. Here all the departments are compactly located under one roof. The building is well suited to naval purposes and close to the water, where docking facilities are good for the patrol boats. The sleeping quarters are excellent, being large and well lighted and ventilated. The plumbing is modern and sanitary. Water is piped to the dock for the use of the patrol boats. While sewage is discharged at the end of the dock there is a good depth there and a good tidal flow which prevent stagnation. A gymnasium is being equipped and every effort will be made to encourage the men to use it. The medical department uses one large room, 96 by 36 feet, partitioned off so as to give a sick bay with 12 beds, a contagious ward with 2 beds, an operating room, a dentist's office, doctor's office, clerk's office, dispensary, diet kitchen, recreation room, lavatory and quarters for the hospital corps. Besides the medical officer and the dentist there are eight members of the hospital corps in the medical personnel. The complement in July was 45 and by December, 190. There have been only two cases of gonococcus infection treated, of which one was contracted prior to enlistment.

Nantucket Section.—The site is high land with a gentle slope to the water. An efficient sewerage system has been installed, the sewage being deposited far out in the harbor. The dispensary and sick bay were established August 20, 1917, in a building well suited for the purpose and easily reached by the personnel. The personnel consists of one medical officer and two members of the hospital corps. The building is equipped for 10 patients, has hot and cold water, a diet kitchen, bath, electric light, office furniture, etc. The health of the personnel has been excellent and there have been no deaths from disease or injury. All foodstuffs going to patrol boats are inspected by the medical officer. Each boat has a galley stove and can prepare warm meals for its crew.

Submarine base, New London, Conn.

Annual Committee of the	Percenta	
Average complement:	of sick	
First quarter, 1917 389	1.1	18
Second quarter, 1917 531	1.4	14
Third quarter, 1917 855	7	734
Fourth quarter, 1917 1, 143	1.4	17

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new g in suptions made Total admissions and readmissions, 542; to duty, 488; dead, 3 (2

drowning, 1 cerebro-spinal fever).

The character of the duty aboard a submarine is such that officers and men should be in the best physical condition, mentally alert, and able to control their emotions, as it might easily happen that one excitable or unstable individual would demoralize the entire crew. During a dive the commanding officer is closely observed by almost the entire personnel of the boat, and any nervousness and uncertainty would at once be apparent. The officers should be able to inspire confidence under the most trying conditions. It is again recommended that the greatest care be exercised in selecting officers for this duty. Officers and men should be excluded from this duty who have any tendency to one or more of the following conditions:

(a) Intraabdominal trouble which might require sudden operative relief.

(b) Chronic tonsillitis or other throat affection.

(c) Marked tendency to common colds.(d) Middle ear disease.

(e) Ozena.

(f) Foul breath from any cause.(g) Unstable nervous system.

(h) Obesity.

It is necessary in speaking of health conditions to remember that the crew of a submarine is small and that practically every man has an important station. With a few men on the sick list it is quite possible to interfere seriously with the operations of the boat. All men with venereal disease, acute tonsillitis, influenza, or any transmissible disease are temporarily relieved from duty aboard submarines owing to the limited amount of space and the increased danger of infecting others. For these reasons, also, it is necessary to keep these men on the sick list for a longer time than would be the case elsewhere or else to assign them to other duty until entirely well.

The new barracks contain sick quarters capable of accommodating 20 patients, a dispensary, operating room, examining room, dental office, diet kitchen, and waiting room. The old barracks were overcrowded for some time and the Y. M. C. A. gymnasium and all other available berthing space outside of this building had to be used. The congestion was relieved by utilizing the steamer Ransom B. Fuller, which had accommodations for 500 men. In June, 1917, a dental surgeon reported for duty. He has been so busy with urgent work that it has not been practicable as yet to carry out a systematic dental examination of all the men.

The laboratory unit from the Naval Medical School, Washington, D. C., consisting of two medical officers and four hospital corpsmen, with complete laboratory equipment, responded to a call for assistance in connection with a study of the meningitis problem early in

The hospital corps has been increased during the latter part of the year. The nursing service has been furnished largely by comparatively new men with relatively limited experience in naval work. In the main, these men have been very capable, quick to learn, and willing and earnest in their work. They are given intensive training as far as practicable and daily physical drill when the weather permits.

It is not only necessary that the uniform for use aboard submarines be warm, but it must also be as near waterproof as possible and allow the greatest freedom of movement. The uniform as now issued to submarines is satisfactory in its general design, but it should be of genuine leather with a detachable woolen lining for the coat, and underneath this, in very cold weather, a woolen suit and heavy underwear should be worn. The glove or mitten could be improved by replacing the stiff gauntlet with pliable leather, which could be strapped around the sleeve at the top of the glove. In bad weather the stiff gauntlet collects enough water to finally leak through around the wrist. The imitation leather uniform recently issued to some of the submarines has shown a tendency to crack and leak after a short time. The gloves of this material are not at all serviceable and when worn aboard the submarine soon become useless.

U. S. Naval Training Station, Newport, R. I.—Six cases of cerebrospinal fever occurred during the year, including two cases admitted

to the naval hospital as with diagnosis undetermined.

The first case occurred on April 4, 1917. This patient had been on the station for about one month. Four cases occurred during the month of May, 1917. The infection in these cases was traced to a draft of men received from the Great Lakes Training Station. On November 3 a suspicious case sent to hospital as with "diagnosis

undetermined" was reported positive by spinal puncture.

When a case of cerebro-spinal fever occurs at this station the following sanitary procedures are carried out: The infected unit is removed from the shack or dormitory in which it is quartered and placed in strict quarantine. The dormitory is then thoroughly disinfected, left vacant, and aired for one week. The infected unit is inspected frequently by medical officers, and all nasal passages and throats are sprayed with an antiseptic solution three times per day. Quarantine is maintained until all contacts have been pronounced negative by culture.

After careful consideration of the various solutions recommended for throat sprays, the medical officer is of the opinion that chlorazene is the best. Dichloramine-T causes intense irritation of the nasopharyngeal passages and is for this reason unsatisfactory. A solution of 20 per cent argyrol was also used and is considered to be very

good.

Six cases of diphtheria occurred during the year, including four cases admitted to the naval hospital as with diagnosis undetermined. Two cases of this disease developed on May 22, 1917, in barracks "B." At this time barracks "B" was very much overcrowded, and the weather was very inclement. The situation was a serious one, as there were no available barracks to transfer men to and thus relieve

the congestion in barracks "B."

The following sanitary measures were carried out: Barracks "B" was placed in close quarantine; the throats of the men were inspected twice daily, and all cases with suspicious throats were immediately isolated until cultures could be made. The dormitories were scrubbed and aired thoroughly each day. Particular attention was paid to the sterilization of mess-gear, airing of bedding, and to the cleanliness of the drinking fountains. The measures taken appear to have been effective, as no further cases of the disease developed. This barrack was kept in quarantine for five days after the appearance of the last case. On September 11, 1917, a case sent to the naval hospital as with tonsillitis gave a positive culture for diphtheria.

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arines l allow All contacts were isolated in tents for five days, and the accepted measures of quarantine were carried out. There were no further

cases of the disease.

The training station was quarantined against Newport, and all milk and ice-cream was barred from the commissary. Daily throat inspection of the entire personnel was held, and all cases of tonsillitis, pharyngitis, etc., were immediately sent to the naval hospital as possible diphtheria suspects. All barracks were scrubbed and aired daily. About 300 petty officers and other men of the crew drew commuted rations and lived ashore with their families. This was a complication which bade fair to be a serious one, as far as quarantine was concerned. The majority of these men were instructors, hospital corpsmen, and yeomen, and their services were required on the station, where there were no quarters for them. After consultation with the commanding officer the following plan was put into effect: A tent was erected at the causeway, and competent hospital corpsmen were put on watch night and day. All men who lived ashore were inspected daily at the causeway, and their throats were thoroughly swabbed with Loeffler's solution before they were allowed to come on the station. Those men who reported diphtheria as being present in their families, and any men with suspicious throats, were immediately sent to the naval hospital for culture and barred from the station until the culture was reported as negative. The quarantine against the city of Newport, the barring of milk and ice-cream from the training station, together with the other measures taken as mentioned above, appear to have been satisfactory, as no cases of diphtheria developed in the personnel of this training station during the epidemic in Newport. The station was quarantined against Newport until about August 15.

Diphtheria has been a source of continual concern to the medical officer, as it is now endemic in Newport. At present there are no facilities for the pasteurization of milk in Newport, but as far as can be determined a pasteurizing plant will be in operation within the next three months. No milk is served to the recruits and the medical officer has recommended that milk be barred from the com-

missary until the pasteurizing plant is in operation.

The record of 49 cases of pneumonia is a remarkable one, especially so when it is considered that during the spring and early summer the training station was very much overcrowded and the weather was very inclement and unseasonable. In addition to these conditions the supply of clothing for the men was not adequate and many of the recruits were without heavy underwear, pea-coats, boots, and sweaters.

The incidence of mumps began with the great influx of recruits at the beginning of the war. Mumps has been more of an annoyance than a menace to the health of the personnel of this training station, and there has not been any serious outbreak of this disease during

the year.

In November, 1917, a large draft of yeomen and hospital corpsmen was received from the San Francisco training station. They arrived at this station with mumps present among them, and since their arrival the admissions for this condition have shown a decided increase. The practice of transferring infected recruits from one station to another can not be too strongly condemned. Both mumps

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were prevalent.

There were 412 admissions for measles and 619 for German measles. The station was never entirely free from these infections owing to the constant influx of new recruits. There were two serious outbreaks. The first occurred in May, giving a total of 159 cases. The second began during the latter part of September and continued through the month of October, giving a total of 548 cases. The infected units were put in strict quarantine and overcrowding was reduced as much as possible. Particular attention was paid to the scrubbing and disinfection of barracks and tents, to body inspection, which was held at least twice and frequently three times per day,

to airing of bedding, and the cleanliness of drinking fountains. Fortunately the infection was very mild in type, and at least half of the

cases were discovered at daily body inspection, as the affected patients, feeling perfectly well, did not report at the sick bay.

About one-half of the cases of gonorrhea admitted were cases discovered at the receiving building at the time of the arrival of the patients on this station. Two cases of syphilis were old cases which were noted by the psychiatrist during the course of his examination of new recruits. Many of the cases of venereal disease admitted were contracted in Fall River, Providence, and other towns in the vicinity of Newport. A considerable number of cases admitting intercourse in Newport stated that they contracted the disease from

streetwalkers.

The order forbidding the sale of intoxicating liquor to enlisted men has had a decided effect in reducing the number of cases of venereal disease contracted in Newport.

In connection with the work of the Department of Justice the following data are obtained from each case admitted with venereal disease: (a) Where and when contracted; (b) street and number of house; (c) was the owner of the house aware of the fact that the house was being used for purposes of prostitution? A report in each case is made to the commanding officer, who forwards it to the proper authorities for further action.

The 30.148 recruits received at this station during the year were all examined by a dental surgeon and had dental records attached to their health records. The senior dental surgeon reports that 90 per cent of these recruits had from 1 to 10 carious teeth. Owing to the large amount of work entailed by the preliminary examination of these recruits, it has not been possible to thoroughly fit all men for the service by attending to their carious teeth. As a rule, it has only been possible to do such emergency work as arose from day to day.

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A separate building is required for the medical department, including an isolation unit complete as regards toilet facilities, bathrooms, etc., fitted to handle at least 500 men. Plans for such a building for the medical department were submitted to the bureau. It is recommended that the bureau authorize the construction of this building as soon as possible. An isolation unit should be constructed at this station for the proper handling of infected units. At the present time, when a contagious disease appears on this station, it is practically impossible to properly isolate all contacts, as the facili-

ties for messing, toilets, etc., are not arranged so that any one unit can be absolutely isolated from another. Under present conditions there is always some contact between the isolated unit and the other recruits. This occurs either in the toilet or mess hall, and of course militates against the proper enforcement of absolute quarantine. A separate unit composed of at least five shacks, with toilet, wash room, and mess hall complete should be installed at this station.

THIRD NAVAL DISTRICT.

During the month of May the prevalence of communicable disease diminished among the personnel in this district. Diphtheria, while showing only about one-half the incidence of the disease in April, still heads the list with approximately 100 cases, including those from vessels. This is more than the total number of cases of all other contagious diseases combined, excluding venereal infections.

Approximately 1,200 cases of diphtheria occurred in New York City during May. There were about 100 deaths from this disease among the civil population. The number of cases occurring in the naval personnel in the city is more than 8 per cent of the whole, or, at the same rate of incidence as that prevailing among the civil population, normal for a population of 480,000. This shows, of course, an abnormally high incidence of diphtheria among the naval personnel in this city. It is explainable in part by the crowded living conditions which compel, both by day and night, intimate personal contact and ready exchange of nasal and buccal secretions. The use of common drinking cups, especially in fire rooms, and the insanitary type of drinking fountains frequently supplied are also contributory causes. As an index of the importance of diphtheria in the Navy as a whole, it may be noted that between January 5 and May 11 there were 1,287 deaths from all causes, of which 29, or more than 2½ per cent, were due to diphtheria.

Wherever diphtheria has occurred the proper procedure has always, so far as known, been adopted by the various medical officers. Their success in controlling the disease has varied with the facilities of the station and the opportunities to segregate, detain, culture,

immunize, and reexamine.

Navy Yard, New York.—In spite of the enormous increase in work and building operations, the sanitary conditions for the year have been excellent. The average number of officers attached to the yard and station has been 200. They and their families have received medical attention as required and likewise, since May 20, 1917, members of the Naval Reserve Force attached to the yard and the crews of patrol boats coming in here. The average number of reservists treated daily is about 35. The number of cases of all kinds seen daily averages 150. Sixty-one prospective candidates for appointment to the Naval Academy were referred here by Members of Congress for preliminary examination. Seventy physical examinations were made for candidates for skilled labor; 6,226 for unskilled labor. First-aid treatment was given to 5,485 civilian employees working in the navy yard. The greatest number of cases was treated in December, 795; the smallest number in September, 322. There were 16 deaths, as follows: Imp

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Heart disease, various types	5
Tuberculosis	1
Drug addiction	1
Blood poisoning	1
Apoplexy	1
Fracture of ribs and laceration of the lung	1
Burns from steam	1
Rupture of internal organ	2
Punctured wound of abdomen	1
Fractured skull	1
Fracture of pelvis and internal injury	1
Fracture of pervis and internal injury	1

There were 5 new cases of lead poisoning. At the close of the year

15,000 employees were at work in the yard.

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Receiving ship, New York.—From January 1 to April 11 the U. S. S. New Jersey acted as receiving ship and for that period answered the purpose very well. About the middle of April the work of the receiving ship as a distinct unit began in earnest, following the great activities of the recruiting agencies throughout the country. Only those who were present can appreciate the trying conditions that existed at that time. There were no adequate facilities for taking care of the enormous number of new arrivals, and every available space was commandeered to house the rapidly increasing complement of the receiving ship. Three interned German ships, actually undergoing preparation for use as transports, were taken over and sent here to assist in housing the recruits. The use of these ships for barracks while they were in process of conversion soon proved highly unsatisfactory, but it seemed the only possible step. Fifteen hundred men were quartered on the *Princess Irene* and a medical officer and three hospital corpsmen were assigned to her. The weather at this time was cold and rainy and there was, of course, the morbidity usual under these conditions. Sick call was attended by from 300 to 500 men daily. By the first week in May the Friederich der Grosse and soon after the Kaiser Wilhelm II were assigned for housing purposes. Not only were these ships in a very bad condition from a sanitary point of view, but a majority of the men placed on board of them were unaccustomed to naval life and had not acquired the personal habits indispensable to health on board ship. The medical officers made daily sanitary inspections and reported their findings to the commanding officer, who did everything in his power to improve the situation. He was greatly handicapped by the want of officers of experience to put in charge of the ships, but the ultimate success of the work at this station was due to the ready cooperation with the medical officers shown by the commanding officer. One of the chief difficulties in the way of establishing sanitary conditions on these ships was the lack of experienced men for sanitary policing. The number of men quartered on them ranged from 4,500 to 6,000. The commissary officer states that at times he messed as many as 7,000 men at one meal. The commissary department was in good hands and the food was always ample and, in the main, of excellent quality. There were occasional cases of diarrhea, due to lack of sufficient means of refrigeration and preservation of meat. It became evident to everyone that the system inaugurated was bad and in August the special barracks built at the City Park, Brooklyn, were opened. As soon as these barracks were occupied a very marked improvement in the condition of the men was apparent and all re-

ports show the superiority of the cantonment over the receiving ship. The barracks at City Park were not sufficiently large, however, and after the German ships had been returned to the yard additional provision had to be made. The Adirondack, of the Hudson Navigation Co., was secured to house the men in excess of 3,000, which represented the barracks' capacity. In December it was necessary to secure an additional vessel, and the C. W. Morse, similar in type to the Adirondack, but of more modern construction, was secured. Systematic instruction of the hospital corps has been carried on at the City Park barracks, and the men have made gratifying progress. The instruction given to hospital corpsmen aboard the receiving ships proper yielded less satisfactory results, owing to the constant shifting of personnel. From the declaration of war to the end of the calendar year 31 newly commissioned medical officers reported at the receiving ship for duty and instruction. Classes were conducted both morning and afternoon for the instruction of these officers in clerical procedures, preparation of forms, hygiene and sanitation, military duties, etc. It is believed that the time and labor expended in this instruction were of great value. The contagious cases at the receiving ship for the year were as follows: Mumps, 190; measles, 54; German measles, 52; diphtheria, 24; chicken pox, 4; scarlet fever, 1. Early in May an isolation camp was established on a plot of ground not far from the receiving ship. It was divided into two groups, one for suspects and one for developed cases of contagious disease. All men were examined twice a day for suspects and the positives were assigned to the proper camps. These examinations often covered as high as three or four thousand men a day, and by means of them it was possible gradually to reduce the number of contagious cases. The work done in the camp was large, as contagious cases from the vicinity, including those from the aforementioned ships in Hoboken, N. J., from the Erie Basin and neighboring waters passed through it in process of transfer to contagious hospitals in New York or Brooklyn.

Swinburne Island, N. Y.—This island, in the harbor of New York, was offered to the Navy by the health officer of the port, and by your order of February 12, 1918, it was taken over by the naval authorities for use of the naval patrol of that section, its hospital facilities being designated as a part of the United States Naval Hospital,

New York.

Ammunition Depot, Iona Island, N. Y.—The total complement of the station is now over 500, consisting of 7 officers, 32 sailors, 105 marines, and about 500 workmen from near-by towns who are em-

ployed here daily.

The T N T, or mine-loading plant, is a small frame building consisting of a lower filling room and an upper melting room. The upper room was built during the past year as an extension to the lower room on a level 12 feet above, and in this were installed two large and four small T N T melting vats, thus separating the melting from the filling process, as these pots were formerly in the lower room. At present it is intended to install two additional melting pots in the upper room, making a total of eight. These melting pots have at present no hoods to withdraw vapors, but recommendations for these have been approved and the hoods will be installed. The

outlets into the lower room from the melting pots above are protected with suitable hoods, and by the use of wide funnels in careful hands very little of the melted T N T overflows or is exposed. So far as possible conditions and methods here have been in conformance with the copy of "Rules for use of trinitrotoluene," promulgated by the minister of munitions in pursuance of Regulation 35 A. A. of the Defense of the Realm (Consolidation) Regulations of 1914 of Great Britain, accompanying circular letter No. 346, dated August 1, 1917, from the Bureau of Ordnance, Washington, About 24 men are employed in the T N T process plant, and only one of them has followed the medical officer's recommendations to wear respirators over nose and mouth. Most of the men protect their hands with cotton or leather gloves, and it is suggested that rubber gloves would be a much better protection. Shifts have been arranged so that during cold weather the men are placed at other work at least every two weeks, and during summer after four to seven days in the mine plant. At present, owing to a remodeling of the former lunch and locker room for a munition house, there is no allotted place to be used for washroom, lunch, and locker room, but a new brick building, 30 by 20 feet, is in process of rapid construction, and will be provided with adequate locker room for changing and keeping clothes, and provided with wash basins and shower bath and benches to be used at lunch time.

The dimensions of the sleeping quarters permit of more than 5 feet between the bunks, each of which is provided with a clothes There is ample window space and at night electricity is used for lighting. Heating is by the hot-water system, with the latest approved direct-indirect method for obtaining warm pure air. The ventilating process is thus ably cared for by intake openings under the radiators, the outlet vents being in the ceiling, from which the vitiated air is conveyed through the roof by five 24-inch patent

automatic suction ventilators.

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Three hundred and sixty workmen have received first-aid treatment, and 22 cases have been cared for in the sick bay until discharged to duty, since January, 1917.

FOURTH NAVAL DISTRICT.

Navy Yard, Philadelphia, Pa.—Well kept restaurants, providing wholesome food, well served, have been established in the yard for the employees and a thorough supervision has been established over all establishments in the city serving food in the yard. The permits of many have been revoked owing to insanitary conditions in the establishments, and every effort has been made to guarantee the purity and wholesomeness of the luncheons served to yard employees from lunch wagons and other sources.

A new disinfecting plant has been constructed alongside the old one and the yard is now prepared to disinfect for the largest of vessels at short notice, and is so doing daily.

There were treated at the yard dispensary during the year 6,187 accident cases among the employees. There were 8 deaths, as follows: 1 cerebral hemorrhage, 1 fracture of skull, 1 lightning stroke, 4 by

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drowning, 1 heat stroke. The average number of men out on ac-

count of injury was 23 daily.

During the year 3,476 applicants for labor were examined, and of these 371 were rejected. Physical ratings were given on certificates of civilian physicians to the number of 11,873; of these 376 were rejections. In order to expedite work and procure more workmen, a medical officer is kept on duty at the Labor Board Office to examine applicants for work at all times. This also saves the workmen the fee usually given a civilian examiner.

The new dispensary building for the yard is under construction, but work has been very much delayed on account of the severe weather. It is even now probable that, in view of the time this building was designed, extensions may be necessary. It is strongly urged that when the new dispensary is ready for occupancy the old building still be retained by the medical department as additional

space for examining rooms, etc., for yard workmen.

The new naval hospital in the yard was commissioned in October and is now carrying an average of 200 patients. The naval hospital, Philadelphia, is now used largely for contagious cases and is also

taxed to the utmost.

the post.

U. S. Marine Barracks, Philadelphia, Pa.—The post medical officer recommends that a distinct building be constructed for the use of the medical department. The enlargement of the post at the navy yard, Philadelphia, has been necessary in the past few years, to meet the increase in the personnel of the Marine Corps, and to keep pace with added activities along all lines of military work. The selection of the Philadelphia yard for fixed and advance base purposes has brought about increased activities, heretofore unknown. It has always been keenly felt that more suitable accommodations for the reception of the sick and injured were necessary.

The post medical officer recommends that a permanent post dispensary and sick quarters be built, large enough to accommodate 30 beds. This building should be of two stories elevation and contain, in addition to the space for beds, a dispensary, operating room, office, laboratory, an examining room, and an eye, ear, nose and throat room, together with a dental office, necessary toilets, baths, storerooms, and quarters. The design for this building would, of necessity, differ from a regular yard dispensary, as it contemplates the housing of such patients as are not ill enough to transfer from

The medical officer has already recommended to the bureau the desirability of having under training at this post, at all times, a unit of hospital corpsmen for expeditionary service. The men can be equipped with marine uniforms and trained along lines applicable to their special service. The medical officer has reason to believe

that the bureau views this recommendation with approval.

Receiving ship and training camp, navy yard, Philadelphia, Pa.—All drafts leaving the training camp are inspected at this office for the presence of venereal or contagious diseases. This procedure is carried out at the receiving-ship offices instead of at the camp because the detail office, pay office, and commanding officer's office for both the training camp and the receiving ship are situated in this building, and as a result men passing out on drafts can be handled more ex-

131

peditiously. When men are admitted from the sick list into the camp loose-leaf records are written and such records are forwarded with the morning reports of sick to the receiving-ship offices, where they are filed in the health records and entry is made in the abstract.

At full capacity of the camp—i. e., 5,000 men—cubic air space was figured per man for barrack building containing the largest number of men (92), and it was found that each man had 271.6 cubic feet of air space. This is a minimum figure for cubic air space, as the average number of men in each barrack building was 84. the cold weather came on in the autumn the commanding officer issued an order that a certain number of windows must be kept open, or partially open, in each barrack to secure proper ventilation, emphasizing the fact that the windows should be kept open especially at night, and that a greater number of windows partially open was better than a few windows all the way open. He also issued an order that inspection should be made of all the barracks at stated times, both during the day and night, to determine the ventilation and correct any insanitary conditions found. All barrack buildings have special ventilation apparatus through the roof designed on a principle suggested by Captain J. D. Gatewood, Medical Corps, United

The camp was designed to accommodate 5,000 men, but since its establishment three of the barrack buildings have been set aside as dispensaries, two buildings as schools, and one building for armed guard offices. Thus it will be seen that the original capacity of the camp is somewhat reduced. The total number of barrack buildings, excluding mess halls, galleys, and schools, is 59. Figuring a minimum cubic air space per man of 400 cubic feet and making allowance for a few men who are quartered in the mess halls and dispensary buildings, the total capacity of the camp should be 4,000 and

of each barrack building 63 men.

It is deemed especially important that the camp should never be overcrowded, in view of the fact that the most damaging infectious diseases in the present war are those which are transmitted by the so-called "droplet infection"—i. e., by the close contact of man to man in the transference of secretions from the nose and throat by cough-

ing, sneezing, or breathing.

On July 26, 1917, a telegram was received from the training station at Great Lakes, Ill., stating that in a draft of 504 men transferred from that station to this there were a number of scarlet fever contacts. When this draft arrived at this station the men were marched into the open ground to the south of the training-camp buildings and examined by medical officers. All suspicious cases were isolated and the draft put in a detention camp of tents established that same evening. On July 27 one of the men separated from the main draft the evening before developed scarlet fever and was transferred to the hospital.

On August 8, 1917, one other case of scarlet fever developed and was transferred to the naval hospital. No further cases of scarlet fever developed in this draft, and they were released from quarantine on the expiration of the maximum incubation period for scarlet fever.

October 8, 1917, in a draft of 67 men received from the U. S. S. Wisconsin, one case having symptoms very suggestive of cerebro-

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spinal meningitis was discovered and transferred immediately to the hospital. The contacts of the entire draft were placed in isolation. The next day the diagnosis of cerebro-spinal meningitis was confirmed at the naval hospital. Regular procedures in regard to the inspection of the men of this draft daily and airing of bedding were carried out. In addition to this, cultures were made from the posterior pharynx and examined by the chief bacteriologist of the health department of the city of Philadelphia, Dr. C. Y. White. tubes and appropriate culture media and facilities for the proper taking of cultures were furnished by Dr. White, and the procedure of taking cultures carefully carried out. The cultures were examined by Dr. White and reports submitted. Before these contacts were released from isolation the laboratory of the League Island hospital was in a position to do a part of the culture work, and this was done by Dr. Lewis on the authorization of Captain A. W. Dunbar, Medical Corps, United States Navy. Dr. White, the city bacteriologist, was most courteous and painstaking in assisting in the work of discovering carriers at this time. Three carriers were discovered and these men transferred to the hospital. No subsequent cases of meningitis developed and the quarantine on this draft was removed as soon as all throat cultures were negative.

On the arrival of a draft of 135 men. October 21, 1917, from the U. S. S. Wisconsin, one case of scarlet fever was discovered. This draft was isolated in the permanent detention camp and no subse-

quent cases developed.

On November 18, 1917, one of the hospital corpsmen in the camp dispensary developed diphtheria. It would seem probable that this infection took place from cases of diphtheria in the city of Philadelphia. Throat cultures of all hospital corpsmen and patients in the dispensary at this time were made and examined at the laboratory of the League Island hospital, and these cultures were all negative for Klebs-Löffler. The Schick test for diphtheria was also made on all hospital corpsmen and patients in the dispensary buildings. Toxin and the technic for its administration were obtained from Dr. John A. Kolmer, of the University of Pennsylvania. The Shick test in every case was negative. No further cases of siphtheria developed. Quarantine on the building was lifted as soon as it was discovered that the Schick tests were negative and the throat cultures negative.

It will be seen from the above history of infections that at all times the main receiving ship camp has been kept clear of infectious diseases, and that no cases developed in the main camp except the one case of chicken pox and the one case of measles in barracks No.

200 and the case of diphtheria in the dispensary building.

It is believed that the careful examination of incoming drafts and the immediate isolation of contacts have been of the greatest value in preventing the spread of infections, and in this manner keeping the main camp clear and in condition so that the routine transfers can be made from the training camp and receiving ship without the danger of carrying infectious diseases to new stations.

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It is recommended that when men are transferred from other stations or cruising ships to this station the medical officer of the receiving ship be notified by telegraph if there are any contacts with cases of infectious disease in the draft. This seems very necessary

in order that this station may be prepared to immediately carry out isolation of contacts so that infections may not be spread to the general camp.

SIXTH NAVAL DISTRICT.

There are 8 section bases, and the medical officer has an office of two rooms, one used as a dispensary and the other as an examining room, and each medical officer obtains medical supplies on requisition, approved by the medical aide. The work of these medical officers consists of examining recruits and the treatment of the sick on patrol boats and in the personnel of the division. Arrangements are made with civilian hospitals for the treatment of cases requiring hospital attention. Where any hospital of the U.S. Public Health Service is available, this is utilized. Cases which are able to travel and which may necessitate considerable hospital care are transferred to the United States Naval Hospital, Charleston, S. C. A hospital ship is needed for this work, and this recommendation has been approved.

At each of these section bases a survey of the town has been made,

and particular attention is called to the following points:

General sanitary conditions of towns. Buildings which might be utilized.

Capacity of civilian hospitals to accommodate sick and wounded in case of emergency.

Automobiles and trucks which may be available in case of emergency for transporting sick and wounded.

Hotels and restaurants which would volunteer for the feeding

of a considerable number of sick in the case of an emergency.

Charleston Section.—There have been during the winter a good many cases of measles in the city of Charleston. During the month of December, 1917, the weather was very bad and there was also an epidemic of influenza. There also occurred among the enlisted personnel of the Charleston section base one case of meningitis, which case recovered.

Jacksonville Section.—This section base is located in a progressive little city of about 75,000 people, with excellent sanitary conditions. The city is located on the St. John's River, about 25 miles from the ocean, and large vessels can dock at the city. The sewerage system of the city is fairly sanitary. The use of a septic tank would be an improvement. Two new incinerators are to be built to dispose of the garbage. The water supply is from artesian wells and is good.

General sanitary features of the sixth naval district.—All of the cities in which the section bases are located have good civilian hospitals, with the exception of Georgetown, S. C. In two of these cities marine hospitals are available in addition to the civilian hospitals

for the care of sick and wounded.

Malaria is the most prevalent disease of the Southeastern States, and during a long season the Anopheles mosquito is active. The screening of patrol boats and all places where men have sleeping and living quarters is an important matter in the prevention of disease, and all of the patrol boats in the section should be screened. Vaccination and antityphoid inoculation has been carried out in regard to all officers and enlisted men in this district. An im-

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portant feature of the work in this district has been the training of a considerable number of Reserve Force medical officers and hospital corpsmen. Nearly all of the medical officers in the Reserve Force have been given a short course in an officer's school. Instruction has been given in routine work of the medical department, in the customs of the service, and the general duties of the medical

officer both ashore and afloat.

Navy Yard, Charleston, S. C.—The effects of the sudden large increase in personnel connected with our entry into the war were seriously felt here. The dispensary building as it then existed was inadequate and a special appropriation of \$12,000 was obtained for increasing the size of the building and large tents were utilized while the work was going on. An emergency hospital of 250 beds was begun at once and was partially available by August 1, 1917. There is now available at this yard a ward of 12 beds and another of 20 beds and additional space is available on screened verandas. The new wing contains a laboratory, a waiting room, dental office, medical storeroom, galley, mess hall, provision storeroom, heads and showers, with a recreation room in the basement. The hospital corps and civilian employees are quartered in the old building. A disinfecting plant has been constructed. An incinerator for the yard has been constructed and is in operation. A conspicuous feature of the work of the medical department has been the systematic instruction and training of new members of the medical corps. There have been performed at the dispensary 97 major and 106 minor operations. Every effort has been made to reduce the liability of civilian employees to accidental injury. They have been urged to wear goggles and gloves and to anoint their faces with vaseline whenever exposed to the danger of eye injuries or burns. By careful attention to ventilation of workshops, by inspections and instructions every effort has been made to prevent the spread of epidemic diseases among civilian employees. In a general way the civilian employees of the yard are a menace to the health of the Navy personnel, owing to the unsanitary conditions prevalent in the vicinity. In September, 1917, a food inspector was detailed to the yard by the Department of Agriculture. His services have been of great value to the station.

Training Camp, Charleston, S. C.—The site occupied by the training camp is an elevated plateau lying in, and adjacent to, the southern portion of the western boundary of the navy yard. It is covered with a growth of large pine trees which add greatly to the appearance of the camp and the health of the men stationed there by providing shade and aiding to keep the ground dry. The soil is a sandy loam; the subsoil contains clay, but, on account of the elevation, the depth of the top soil and the sand in the subsoil, mud is an unknown

quantity.

The camp buildings occupy an area of about 22 acres. They are divided into three main groups. The buildings of the first regiment together with the administration building, officers' quarters, and the main sick bay lie inside the navy yard proper. The camp is divided into five regiments and will accommodate about 5,000 men. Common to each regiment are the following buildings: A combined mess hall and galley, heads and washhouses, barber shop, regimental headquarters, and 40 bungalows. The mess halls and galleys are built in one unit for each regiment and have accommodation for

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1,000 men. The galleys are equipped with four sections of Navy standard ranges, six steam-jacketed kettles, and two coffee urns. Mechanical dishwashers have been requisitioned and will be installed as soon as they are received. Each galley is provided with an ice box of adequate size and two other rooms for storage. The heads and washhouses for each regiment are combined in one building, 181 feet 6 inches by 27 feet, having a cement floor. Ventilation is by means of 2-foot screened sections along eave line around entire

The bungalows are built of lumber, covered by tar paper and have roofs of the same material; they are unceiled; the inside dimensions are 16 by 30 by 10 feet and they have $2\frac{1}{2}$ feet gable space. They are designed to accommodate 25 men each and to allow 240 cubic feet of air space for each man. Heat is provided by small stoves designed to burn either wood or coal; these are set in sand boxes to prevent danger from fire. The men sleep in hammocks, which are swung from hooks in beams about 7 feet above the floor. All buildings are constructed on brick piers about 2 feet above the ground level to prevent floor dampness. The mess halls are not glazed. They have two 2-foot screen sections along the sides and ends which can be closed by solid wooden shutters. The bungalows are similarity fitted up along the sides and have in addition ventilators approximately 18 by 24 inches extending up into the gable spaces in each end.

The quarantine camp, west of the Seaboard Air Line Railroad, is at present composed of tents having wooden floors, accommodating two men each, who sleep in cots. One hundred tent floors have been built. It is provided with a 4-section washhouse and head building similar in interior arrangements to those used in camp. It is recommended that the tents be replaced by frame buildings at the earliest opportunity for the reason that the tents will be difficult to

heat during cold weather.

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There are three large sick bays in the camp. These buildings are ceiled and glazed and will be heated by steam and supplied with hot water. They are adequately supplied with toilet and bathing facilities and have ample sleeping accommodations for their personnel. An incinerator is now being installed. The main sick bay contains

the offices for two chaplains.

All food supplies for use of the camp are inspected by one of the medical officers and an inspector from the Bureau of Animal Industry, Agricultural Department, especially appointed for this purpose. This inspection takes place at the first regiment galley. Supplies are redistributed from this point. After acceptance all perishable food is removed to the ice houses in the mess halls and is kept there until used. When practical all perishable food is used within 24 hours of its acceptance.

The bakeries, butcher shops, and markets from which supplies are purchased are first subject to inspection by the expert from the Bureau of Animal Industry, and their sanitary condition must be satisfactory before they can receive any orders for supplies from the camp. All meals are inspected by the medical officer of the day before being served, and the sanitary officer makes frequent inspection of mess halls and galleys. Food is prepared by enlisted cooks

who are receiving instruction in methods of preparation by the in-

spector from the Bureau of Animal Industry.

Taken as a whole the camp has been unusually free from diseases of all kinds. The main factors contributing to this result are the excellence of the camp site, the good climatic conditions, the facilities afforded the medical corps, together with the hearty cooperation

of the line officers in charge, and the care taken of the men.

During the period covered by the report two drafts of men have been received which have affected the report considerably; the first from New Orleans received September 7, in which were found 45 cases of venereal disease; the other has come in three divisions from the Great Lakes training camp. This draft reported with one case of cerebro-spinal fever and several cases of mumps and measles; there were as well many cases of influenza and bronchitis. The principal feature in regard to this draft lies in the fact that, just prior to its reception, contagious disease had been practically eradicated from this camp. One of the men in this draft died a few hours after admission and transfer to the United States Naval Hospital, Charleston, S. C.; cause undetermined. There have been no other deaths at this camp.

Marine Barracks, Paris Island, S. C.—The following are the chief

improvements which have been made during the year:

Main Barracks: All men except from 700 to 1,000 have been moved to the cantonment (training camp) for quarters and messing. This relieves the congestion at the main barracks. Only about 150 men are now quartered in tents. The old insanitary, unsatisfactory mess hall has been entirely renovated with new impervious decks, new kitchens, and new equipment throughout, so that this institution is now one of the show places of the station. The entire equipment appears to be all that could be desired. A new toilet and wash house has been built; this has 50 toilets, wash bowls ,and about 25 showers, with a covered space outside for scrubbing clothes. A new swill house with track and car to take swill to end of a small dock where part of it is taken away by colored men. A new addition to power plant is about to be completed. This will furnish ample electric light and power and steam heat for all parts of the main barracks. A new bakery with capacity of 4,000 loaves of bread daily is in satisfactory operation.

The water supply has not been materially changed as yet. Five new wells (about 100 feet) were sunk and water is pumped to all parts of the station, including training camp and quarantine station. There is now an ample supply of water, but it is still too salty to be available for drinking purposes. Plans are now under way for obtaining an ample supply of fresh water for the needs of the station. The Marine Corps has authorized the necessary expenditure and appears determined, if possible, to provide fresh water here and eliminate the water barge and its concomitant dangers and expense. A water expert has been called in to investigate conditions and his recommendations are being carried out as far as possible. It is to be

hoped that these efforts will be crowned with success.

Cantonment (training camp): In general this camp is quite satisfactory except during the extremes of hot and cold weather. The buildings are of rough construction and in cold weather are not

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properly ventilated and they do not have the proper amount of floor

space per man for the number quartered in the barracks.

Quarantine station: This part of the camp lies about 1 mile to the south of the main barracks on a small point between a creek and the Beaufort River. Here are located a receiving office, an examining room, and sick bay, and separate barrack quarters for applicants and enlisted recruits. For these two units there are five mess halls. The capacity of this place is about 800 men, and the limits of the reservation are such that the capacity can not be increased without occupying adjacent land which does not belong to the Government.

It can readily be seen that this "quarantine station" does not always answer its purpose. Two or three times during the past year it has been necessary to carry out quarantine elsewhere, and this station became merely a receiving depot. Recently about 1,500 recruits were enlisted here in about two weeks' time, and the "quarantine station" ceased to exist as such. The limited area of this place and the importance of proper segregation of new recruits from a training camp make it almost imperative that additional space should be acquired adjoining this quarantine station in order that it may be expanded as the needs require. Such space is available, and it is recommended that condemnation proceedings be adopted, if necessary, to acquire what is needed.

At this station a quarantine period of two weeks has been a matter of routine. When space was not available to complete this period at the quarantine station, the period has been completed elsewhere with more or less difficulty and discomfort for the men. In summer it is feasible to have a quarantine camp in tents at the maneuver grounds (5 miles away), but in winter with concomitant cold and rain this is not desirable. The distance to the maneuver grounds greatly embarrasses the Quartermaster Department in the transportation of stores, equipment, etc., and medical supervision is main-

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No psychiatrist has been on duty here and the examinations have been made by the regular medical officers at the examining room, quarantine station. Such tests as have been made were in the form of conversation with the applicant and, in some cases, some modification of the Binet-Simon test has been utilized. Between January 1, 1917, and January 1, 1918, 15,699 applicants were examined by medical officers; of these 394 were rejected for various defects. Ten applicants were rejected on account of mental inferiority or insanity, which was more or less evident. A large percentage of these rejections were for defects which could have been determined by careful examination at the recruiting station. In many cases the applicant stated that no examination for hernias, varicoceles, hemorrhoids, otitis, or deafness had been made. Many reports along this line have previously been made to the bureau.

It is well known to the examining officers that a certain percentage of cases of feeble-mindedness, constitutional inferiority, and potential dementias slip through. A few of these are eliminated by later examinations made upon request of company commanders or upon receipt of information from parents, psychiatrists, etc., who have

known the applicant prior to coming here.

One severe epidemic of measles developed at the station early in the year and continued until July. It was impossible to limit the spread of this disease on account of the congested condition of the station and lack of proper facilities for messing and toilet. There were no deaths from this disease, although several cases developed broncho-pneumonia.

Three sporadic cases of cerebro-spinal meningitis developed during the year with one death. The other two cases fully recovered and went to duty. No diphtheria has appeared in this vicinity except one case in a negro boy. This case was treated and recovered.

No scarlet fever appeared until November. Since then there has been one other case. Both cases appear to have been sporadic, since no contagion could be traced.

On the station and at the hospital there have been seven deaths, as follows: Pneumonia, 2; meningitis, 1; appendicitis, acute, 1; septicemia, 1; dysentery, entamebic, 1; dilatation, acute cardíac, 1.

Sanitary inspection, Section Base, Jacksonville, Fla.—There is undoubtedly a marked prevalence of venereal diseases in the city, and an active campaign against these diseases is being carried on. Contagion is acquired through clandestine prostitutes in the form of streetwalkers, roomers, etc. The Fosdick Commission has appropriated \$7,500 and the United States Public Health Service is conducting two free clinics for treatment, given to all who apply. Plain-clothes men are detailed to look out for streetwalkers, and only a very limited number of the soldiers in camps in the vicinity are permitted to come into the city. The medical officer of the station has supplied the personnel, numbering about 115, with the naval pamphlets on the subject of venereal diseases, and the large posters will be posted in the section warehouse where the men congregate. He is also giving talks on the subject to the men. Three cases of venereal disease were found among the personnel of the station last month.

A campaign is now being carried on by the city health officer to obtain better sanitary conditions in the restaurants and shops selling soft drinks, ice-cream, etc., in the city, and all employees will be given antityphoid inoculations immediately. The employees of the shipyards are also being given antityphoid inoculations.

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SEVENTH NAVAL DISTRICT.

Naval Station, Key West, Fla.—Health conditions have been excellent throughout the year, the percentage of sick being 2.9, which is about the average for the last few years, though the personnel has trebled. During the year 412 cases of sickness were treated, with but 1 death. The training camp under the jurisdiction of the naval station has a capacity of 1,000. The barracks are onestory frame structures accommodating 75 men each, with separate mess halls and galley. The buildings are very close to each other and the area occupied by them is congested. Sanitary conditions of the town leave much to be desired and efforts have been made to cooperate with local authorities in correcting defects.

EIGHTH NAVAL DISTRICT.

U. S. Naval Air Station, Pensacola, Fla.—The station has been remarkably fortunate, and with the exception of a few scattering

cases of measles and mumps no epidemic conditions have so far arisen. Nevertheless, the danger still exists and, if the complement of the station is to be maintained as at present, immediate steps should be taken to construct, without delay, additional barracks and toilet facilities.

The present cantonment was erected from departmental designs and was not suited for local climatic conditions. This, however, has been corrected by raising the monitors, increasing the window space, and increasing the length of each building, but even with this the allotted air space recommended by the Bureau of Medicine

and Surgery is too small.

In the new buildings steam heat is supplied. As recommended in previous reports, this should be extended to all buildings on the station, as at present the method of heating quarters and office buildings by open fires and stoves constitutes a serious fire menace, besides being expensive. The impression seems to prevail that, as this station is located in Florida, the question of heating is of minor importance, but as a matter of actual fact, for four months of the year at least, and for a possible two months additional, it is necessary to keep fires burning constantly. This method of heating is quite unsatisfactory, as it does not produce an even temperature, requires constant care by many hands, and as stated before is expensive, a point which is not consistent with the Government's pro-

gram of economy.

The station has been fortunate in the matter of epidemics. During the month of July the U.S.S. Huntington arrived with about 85 cases of measles and mumps. The weather was mild and a camp was established to care for these conditions. Incidentally a general epidemic of bronchitis and influenza existed, so a separate camp was established for all cases suffering with any bronchial affection. This relieved the overcrowded conditions aboard this ship and permitted a thorough fumigation, and within a short time the epidemic conditions disappeared and the station escaped contamination. During the month of December, however, with the heavy influx of recruits from all over the country, the station was not quite so fortunate and there now exists a limited epidemic of these two conditions, which is likely to persist as long as the station is overcrowded and recruits are received without detention. The question of a detention camp has been considered, but no available means exist for maintaining same, and, if the means were at hand, the routine of the station would not permit, as this station is for intensive training purposes and many are transferred for foreign service who have been here less than one month.

The new naval hospital opened on December 26, 1917, relieved the dispensary of the care of most patients, but a number of minor ail-

ments are still cared for at the dispensary.

Lieutenant C. J. Brown, Medical Corps, United States Navy, has been detailed as examining officer, and, in addition to recruiting and the examination of civil employees, he has supervision of the examination of aviators. These examinations are conducted on the lines laid down by the Bureau of Medicine and Surgery, with the addition of certain tests which have been devised through experience at this station. After a year and a half of association with aviation duty,

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been ering it is believed that an aviator need not be a superman; any ordinary, healthy, normal individual may qualify physically and psychically as far as can at present be determined, but the real test comes under actual flying conditions, and elimination must be made by the actual instructors. The much advertised Bárány test has been in use on this station since November, 1916, but no practical value can be assigned to it. A much more simple test for equilibrium is the use of a 3-inch plank raised 2 feet from the floor, which candidates are re-

quired to walk blindfolded.

The sanitary conditions of Warrington and Woolsey, both located on the reservation, with a combined population of approximately 1,500, remain open to question. As mentioned in previous reports these towns are drained by surface drains, have sealed privies, poor roads, no lights, and the majority of the houses are mere shacks, built of rough boards. The question of installing a sewerage system and underground drains has been discussed, but up to the present time no appropriation has been made. This condition constitutes the greatest menace to the station and should be corrected without delay. Repeated efforts have been made to have the citizens of these towns cooperate in maintaining a healthy community, but, as they are not subject to tax, no results have been obtained in this direction. They seem to fear the possibility that the station may close down at any time and are not disposed to go to any expense. They further feel that since most of them are employees of the Government and living on Government property such work should be undertaken by the Government, and the probabilities are that, if the work is ever done, it will have to be done at Government expense.

Industrial conditions at this station are limited to seaplane repairs and construction and the manufacture of gas for balloons. There has recently been installed a modern plant for the manufacture of hydrogen gas for balloons, which apparently has all necessary safeguards, and stringent orders are in force in regard to the filling of oxygen and hydrogen tanks. The "doping" of planes is done at present in a compartment of the joiner shop, and employees are frequently cautioned about the necessity of abundant ventilation. There is now under construction a separate building for this work, which will be completed within a few months, and special attention will be paid to ventilation. So far only one very mild case of tetra-

chlorethane poisoning has developed.

U. S. Naval Station, New Orleans, La.—The medical activities of this station have been expanded. It has been found necessary to occupy additional quarters near the receiving ship. Building No. 1, a small building about 25 feet square, was turned over to the medical department and here has been established a room for the physical examination of arriving recruits and for other purposes, a first-aid department for yard employees, and a record room for yard employees, and for the health records of the personnel of the station and of the eighth naval district. In building No. 10 (receiving ship) an office has been opened for morning sick call and for the treatment of venereal diseases. In addition to these two offices a medical officer is detailed to make sick call at the marine barracks. It has been found necessary to accommodate the dental officers at the yard dispensary, where two officers and two outfits are constantly employed.

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	(a) Morbidity, contagious diseases:	
	Mumps	91
	Measles	22
	German measles	50.
	(b) Mortality, 2:	50
,	Pneumonia, lobar	1
	Tuberculosis, acute pneumonic	1
	(c) Percentage of daily sick	2. 4739+
	(d) Typhoid prophylaxis completed during the year	2 446
	(e) Total number of vaccinations during the year	2, 307
	(f) Yard employees vaccinated during year	1, 306
	(),	1, 500

Civilian employees. Average number working, 1,081. First-aid treatment has been efficient, results have been good, the total incapacitations for the year being 176. Working conditions have been closely watched, and sanitation of working quarters has steadily

improved.

Barracks are overcrowded. This condition has been made the subject of separate reports, and plans have been drawn up and reconmended by the public works officer which will partially relieve this condition. Saturday bunks, either of wood or iron, are a mis-It is believed that the use of hammocks or movable beds or cots, which can be taken outside and thoroughly aired and sunned, is the only method of furnishing these barracks that should be considered. Bathing facilities are good, shower baths being sufficient in number, well constructed, well drained, and kept clean at all times, yet no hot-water supply has been installed, which is a serious defect, particularly in winter time. The contract for furnishing hot water for bathing purposes has been let, but fulfillment has been delayed on account of a strike in the contractor's establishment. The marine barracks are well lighted and heated, have good ventilation, good water and sewage facilities, and the sanitary condition of the same has been good. The eradication of all vermin, pediculi especially, has been pushed, yet a room for fumigation and disinfection of all bedding and clothing is needed.

The training station at West End was commissioned November 24, 1917. It is located about 500 yards from the shore of Lake Pontchartrain and is immediately flanked on the opposite side by a stag-

nant blind extension of the lake.

The buildings are: One administration building, one kitchen and dining room combined; two barracks; one combination toilet, bath-

room, and laundry room.

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The administration building is adequate. A first-aid station has been installed in this building. The kitchen and dining-room building is 40 feet wide by 149 feet long. The kitchen is well arranged except that there is no provision for boiling or otherwise sterilizing the dishes. The dining room will accommodate approximately 340 persons. The barracks are 126 feet long by 20 feet wide by 10 feet high in the clear and unceiled. These buildings were fitted with four rows of superimposed bunks. This provides bunks of this type for 112 men, and including the 4 petty officers accommodated in the small rooms at the end of the building, makes a total complement of 116 persons in each building. Under this arrangement the floor space per man is 21.4 square feet, the air space is 285 cubic feet, including the attic space.

Prior to the beginning of building operations on these barracks the blue prints were procured by the medical department and the poor arrangement of bunks and the overcrowded condition indicated in the preceding paragraph brought to the attention of the commandant and public works officer. Recently, following representations to the Bureau of Medicine and Surgery, the Bureau of Yards and Docks ordered alterations to conform with the sanitary instructions issued by the Bureau of Medicine and Surgery. The revised plan submitted by the public works officer contemplates a rearrangement of the present bunks to provide for a complement of 76 men, the bunks to be superimposed, and single instead of double or twin, and to extend crosswise from one side only of the building. This provides for 450 cubic feet of air space and 35 square feet of floor space.

United States Naval Training Camp, Gulfport, Miss.—The grounds of this station are the same as those originally selected for the Mississippi Centennial Exposition. They are naturally considered as divided into two parts, one lying between the Louisville & Nashville Railroad and the Gulf of Mexico, and the other north of that railroad. The first section includes about 57 acres, while the other contains about 90 acres. This makes a total of about 147 acres in the whole tract. The section (57 acres) south of the railroad fronts on the Gulf of Mexico, along which run the beach boulevard and the track of the Gulfport & Mississippi Coast Traction Co., both connecting the city of Gulfport with the larger municipality of Biloxi. The distance between those cities is nearly 14 miles. The beach boulevard and the electric road have been subjected repeatedly to the effects of tropical storms. These storms, when the center passes to the westward, are said to cause high tides, perhaps 9 feet, and tend to greatly injure the roads which are along the beach. But the location of the grounds close to the gulf, upon which they actually front, makes the conditions in warm months much more conducive to comfort, as there are regular land and sea breezes.

A fair conception of the climate here in winter is important in relation to a camp because it declares the necessity for heating camp buildings during that period, for installation of water pipes with a view to prevention of freezing, and for providing personnel with full supply of clothing and bedding. In December the thermometer was as low at one time as 17 F. Many water pipes were broken and, apart from such low temperature, there were a number of damp, cold days that would tend to cause sickness in naval personnel. These remarks are made partly to abolish any idea that may exist in regard

to the equability of climate in a location so far south.

There were 1,529 cases of malaria in Harrison County during the year 1917, and of these 591 were assigned to the city of Gulfport. Harrison County has a population of about 38,000 and Gulfport little more than 6,000, and it seems only fair to assume that a very large number of malarial cases are never made a matter of record, patients treating themselves.

NINTH, TENTH, AND ELEVENTH NAVAL DISTRICTS.

Sanitary Report for 9th, 10th and 11th Naval Districts.—At the present time the population of the Great Lakes Station averages above 30,000 men. A great many of these are housed in tents, but ice-cream the barracks nevertheless are crowded. No untoward effects are cream middless

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noted on this account and it is believed that none will develop at this season of the year. The overcrowding is offset by the mild weather, free and ample ventilation of barracks, nonexposure of the men, and the greater number of hours spent in the open. This explains the difference in disease incidence during the winter and summer and points to the necessity of extra care and provision amid cold, damp, and changeable weather conditions, as well as the necessity of reducing the complement at such a time, unless the specified floor area of 50 square feet per man can be maintained. In view of last winter's experience, especially during December, it would seem wise to make every effort to do all the recruiting possible in the summer time so that the men will not have to undergo the change during

respiratory-disease-producing weather.

There is some need, especially in summer, for extra-cantonment sanitation, and the sanitation officer has visited and inspected all the important food and drink establishments in the near-by towns outside Willingness to cooperate has been found in every case and sanitary recommendations have been accepted. All soft-drink and ice-cream stands have promised to give sailors individual service in the form of paper cups and dishes. To make this more effective, it is believed that an order should be issued prohibiting men from accepting any other kind of service. This would indirectly help the civilian population by creating a desire among them for these sanitary improvements. An order of this kind, if given some publicity, would be an excellent lesson in sanitation to both civilians and enlisted men. The district surrounding Great Lakes has not had the benefit of an extra-cantonment campaign such as is carried out around Army cantonments. On the other hand the need is not so great here as in the southern camps.

The following recommendations were issued as an order on May

0. 1918:

In order to insure a safe supply of milk, ice-cream, and soft drinks upon the station, the following requirements have been determined

upon, and are recommended for enforcement:

(a) All dairies and bottling works supplying milk, ice-cream, or soft drinks to the station must be inspected by a sanitation officer or a member of the medical personnel, at least once a month. Inspection must show that the premises are properly and adequately lighted, drained, ventilated, and screened and have proper plumbing. The floor must be of impermeable material which can be flushed and washed clean with water. All utensils, holders, milk machines, ice-cream machines, bottles, etc., must be sterilized with steam each time before being used. The equipment of the plant must be adequate and its operation conducted in a sanitary manner.

(b) Whenever it is deemed necessary employees must submit to a physical examination, and to vaccination against typhoid and

smallpox.

(c) Evidence must be shown that milk has been pasteurized at 140 F, for 20 minutes, and immediately cooled and bottled. The total bacterial count must not exceed 50,000 organisms per c. c., at the time of distribution.

(d) The same process of pasteurization must be carried out on the ice-cream mixture before freezing, and after this treatment the ice-cream must be well protected from outside contamination until delivered.

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(e) Carbonated waters and other soft drinks must not contain a total count on agar of more than 100 organisms per c. c., and must

not ferment lactose broth in 50 c. c. amounts.

United States Naval Training Station, Great Lakes, Ill.—Cerebrospinal fever. An epidemic of this disease occurred in the spring coincident with the increase of the size of the station from 800 to 10,000, and a second epidemic began in December coincident with an expansion from 13,000 to 25,000. The fact that epidemics corresponded so closely with periods of expansion is very striking. The first epidemic ended with more settled conditions and the advent of summer. Apparently no other factors played any part.

Diphtheria. Sporadic cases perpetually appear, traceable entirely

to outside infection.

Pneumonia. This disease follows meningitis so closely in distribu-

tion that it is believed that many influences exist in common.

Mumps. Mumps is so common both within and without the station that attempts to trace sources of infection are impossible, and the same applies to measles and German measles. Although a factor in all infectious diseases, it is in mumps, measles, and German measles that the very pernicious influences of public gatherings of all kinds are felt. Philanthropic organizations and individuals have placed a heavy burden on the Navy, in many cases far greater than any benefit to be derived.

Scarlet fever. This disease has been mostly sporadic, except a severe epidemic in July, traceable to a food handler suffering with

the disease.

Venereal diseases. These have not been excessive, a majority being found in recruits upon reporting for duty. The remainder are traceable to the excellent opportunities for exposure in neighboring large cities. Prophylaxis produces good results if taken in time, which is impossible when recruits are granted 48-hour liberty.

Housing of recruits.—During the spring rush men were placed in tents. In the fall the permanent barracks in the various camps were occupied. The December rush greatly overtaxed capacity, especially detention, and men often passed through detention in as short a period as three days.

The following is a report of dental operations (from March 22)

to December 31, 1917):

The following is a report of the work done in the recruiting office during the year:

to diversity of the light that the design of the	U. S. Navy (Regular).		Naval Reserve.
	Original.	Reenlist.	
Total applicants. Total enlisted Examined by medical officer Rejected by medical officer	1,041 559 885 275	76 73 76	4, 098 3, 594 4, 098 447

Pharyngeal culturing to discover carriers of meningococci was begun at this station in May, 1917. This report comprises work done by the Memorial Institute for Infectious Diseases, Chicago, and by the Northwestern University Laboratory and U. S. Public Health car "Wyman," as well as by the station laboratory. The work of the laboratories first mentioned began in May and extended into September, 7,294 cultures being taken. The remainder of the work was done at the station laboratory.

Beginning May 15, near the termination of an epidemic of cerebrospinal fever at this station, the men in contact with cases of cerebrospinal fever have been cultured wherever the cases have developed. At present it is the practice to keep these men in quarantine until the laboratory can make a preliminary report based upon the cultural characteristics of the colonies that have developed, and the morphology and staining reactions of the organisms isolated. The men who are suspected carriers by this preliminary report (given within 24 hours from the time of culture) are withdrawn from the company and placed in isolation within the cubicles at the disposal of the regimental hospital unit. The quarantine on the remainder of the men in the company is then lifted, thus keeping them from duty a minimum length of time. The following day a final report is given by the laboratory, based upon the agglutination reactions of the suspected organisms, and the men in isolation are discharged to duty or transferred to a carrier camp, accordingly as the final report is negative or positive.

On June 22 an observation camp (Boone) was established in which all patients discharged from the naval hospital were detained until two successive negative cultures were obtained at intervals of 3 to 4. days. Carriers thus discovered were transferred to the carrier camp. In November the observation camp was discontinued as a special station camp, since which time cultures have been made at the hospital, from which the patients are discharged directly to duty.

Pharyngeal cultures are taken from all men arriving at the staltion as early as possible in their period of detention. The men suspected of being carriers are isolated in the cubicles awaiting the final report and their disposition is determined as in the case of con-Within a few days before transfer from the station to duty elsewhere, all men are again cultured to reduce the danger of carry, ing infection to other stations. Men suspected of being carriers are taken from the "drafts" and disposed of as above. Carriers are detained in a special camp while undergoing treatment, and pharyngeal cultures are made at intervals of five days. After four successive negative cultures the men are discharged to duty. The period of detention in the carrier camp varied from 20 days to several months. During the period when the observation camp (Boone) was in operation, men discharged from the carrier camp were sent through there as well as hospital convalescents.

The results of pharyngeal cultures made in incoming detention and on men leaving the station are recorded in the health records. A card index is kept of the carriers found. The security remains

proper season the disease started and the season of the latter as as

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4,098 3,594 4,098 447

other years. Culture was the simply produced two problems of which the earrier problem is more serious than the meningities. It is safe to say that the average emisted norm would profer a disgnessis

of meningitis to one of carrier.

A tabulation under several headings of the cultures made at this station to date, follows:

station to date, follows:	
Men cultured in incoming detention: Number cultured	19,639
Number cultured	139
Number cultured	0.7
Percentage, positive	
Men cultured in drafts before leaving station: Number cultured	14,008
Number cultured	234
Number cultured	1.6
Percentage, positive	
Percentage, positiveContacts of cases of cerebro-spinal fever: Number cultured	3,660
Number cultured	44
Number culturedNumber positive	1.2
Percentage Dositive	
Hospital convalescents:	1, 463
Number cultured	39
Number cultured Number positive Percentage, positive	2.6
Percentage, positive	
Meningococci carriers: Number of cultures	2,716
Number of culturesNumber of positives	623
Number of positivesPercentage of positives	22.9
Percentage of positives	41 100
Cultures made, including:	1, 079
1 1-1:00 000000	
Number of positives, including carriers Percentage of positives, including carriers	90 770
Percentage of positives, including carriers Cultures made, exclusive of carriers	456
Number positives, exclusive of carriers	1.2
Number positives, exclusive of carriers	669
Percentage positives, exclusive of carriers Cultures made, unclassified Laboratory during 1917	42 155
Cultures made, unclassified	7, 294
m / 1 14-mag made for office laboratorics, discounting	
10001 00100	49, 449
Total cultures made on the station during 1917	. 1 1
2 2 2 1 1	of laboratory

The following is a report of all laboratory work done at laboratory of this station (since October 1, 1917):

of this station (since October 1, 1911).	736
Meningococcus cultures	1, 188
Meningococcus aggruunations======	321
Urethral smears	306
Diphtheria cultures	226
Urinalysis	20
Throat smears	7
Blood counts	32
	241
	952
Feces plated on Endo's media	149
	39
SputumSmears from chancroid	10
	6
	304
	231
Water analysis (bacteriological)	6
Detted drinks (hecteriological)	LEBY
Bottled drinks (bacteriologists)	The

Meningococcus carriers. This work has been unsatisfactory. The isolation of carriers was started too late in the summer to be considered a factor in the cessation of the disease in July. During the summer cultures were continued and carriers isolated, but at the proper season the disease started and the season curve is the same as other years. Culture work has simply produced two problems, of which the carrier problem is more serious than the meningitis. It is safe to say that the average enlisted man would prefer a diagnosis of meningitis to one of carrier.

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There is little doubt that the camp contains over 5,000 carriers. If these were entirely segregated and the remainder given a few days' liberty, the high percentage of carriers would again be present upon their return. With anything short of absolute isolation the carrier situation changes far too rapidly to allow of detection and isolation. Recommendations:

(1) Curtailment of the activities of the philanthropist in the matter of public entertainments and modifications of the Navy uniform.

(2) The establishing of a riged outgoing detention.

(3) Provisions for housing all men on the station to prevent the introduction of disease and to permit quarantine after disease is introduced.

The use of Schick's test was begun on September 14, 1917, for the purpose of finding its value as an aid in handling diphtheria in the service. The technique used at the Willard Parker Hospital, New York, was used. Readings of the reaction were made at 24, 48, 72, and 96 hours for a time, when it was decided to only make the read-

ings at 48 hours after the inoculation.

The administration of Behring's serum was begun on November 8, 1917, and an effort was made to give all men showing a positive reaction to Schick's two doses of the serum, the second dose being given one week or 10 days after the first. At this time an effort was made to do Schick's on all men upon their arrival at the incoming detention camps. It was soon found that, due to the large numbers of men coming in, it was impossible to do Schick's and complete the immunization of Behring's serum on all men. Acting on the instruction of the medical officer, the practice of attempting to inoculate all the men coming in was abandoned and a closer study of the work started. New permanent companies in Camp Dewey were taken for this study.

Entries are made in the health records of the men receiving Schick's test; Schick's test positive, negative; also of the positives

receiving Behring's serum.

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Up to the present time not enough data have been collected from which any definite information can be obtained. The following data have been collected:

Total number of men receiving Schick's test	835 045
Total number of men showing positive Schick's reaction but who had	
no Behring's serum	855
Total number of men that have had the 2 doses of Behring's serum	305
Total number of men that have gotten only 1 dose of Behring's serum	385
Total number of contacts cultured (7 of which had previously received 2	
	114

The following is a report on men having diphtheria and antitoxin diphtheria and those having antitoxin alone:

Diphtheria and antitoxin	78	men,	positive	30,	or	37.1	per	cent.
	31	men,	positive	10,	or	32.2	per	cent.
Antitoxin	7	men,	positive	4,	or	57.1	per	cent.

It is probable that the percentage of positives is not quite accurate, as many of the results were read at 48 hours. The final readings on those done this month were made at 72 hours, which time is best unless an emergency exists, in which it is desirable to give the antitoxin at once. The percentage of positives found was 47.3. The 385 men who only got one dose of Behring's were sent out to different camps and could not be located until the time had passed for their

second dose. Since beginning the new method we find that the largest number of positives had resided in towns of between 500 and 10,000 population, 54.02 per cent; the country coming next, 47.05 per cent; and cities from 10,000 up, 43.01 per cent, 64 men from Chicago showing 39.006 per cent positive. While the number of men having diphtheria and no antitoxin is small, it is rather interesting to note the low percentage of positives, 32.2. and to manufacture ter of public entertainments and modifications of the Navy uniform.

(2) The establishing Tofrard Laval httliam Lion.

U. S. Naval Training Station, San Francisco, Cal.—After two years of careful observation of the climatic conditions at this station there appears no reason to alter the opinion expressed in the annual sanitary reports for 1915 and 1916, that the relatively high sick rate in the past has been due not to the climate but to badly ven-

tilated and insanitary buildings.

This is borne out by the fact that, despite the crowded condition of the station consequent upon mobilization, the relative sick rate has materially decreased, due, it is believed, to the quartering of all men in detention camp in tents rather than in the wretchedly insanitary detention barracks as before, and also to a number of general sanitary improvements in ventilation, clothing, and messing, previously recommended by the medical officer, but which he had been unable to have put in effect until the increase in personnel consequent upon war made such improvements immediately and imperatively neces-

sary and increased money allotments made them possible. Idea to not

The main barracks are overcrowded, it being necessary to swing hammocks on 21-foot centers in addition to berthing men in cots on the main floor. Cots are placed on 5-foot centers, the men being required to alternate head and feet, so as to minimize droplet infection. This same alternate head-and-foot rotation is followed in swinging hammocks. The ventilation of this building has been materially improved by construction of transoms over each window, these transoms being fitted with a glass baffle plate to direct the air current toward the ceiling, and by the substitution of ventilating skylights for the former closed types. As soon as mobilization seemed probable, it was decided to abandon the old detention barracks for dormitory purposes and to establish a detention camp, the old barrack building to be utilized for offices, dispensary, and mess halls. Tents, to the number of 1,750, of the wall type, 9 by 9 feet, were pur chased in San Francisco, and a definite camp plan determined upon, so that it could be pitched in successive units as necessary. toilets and three bathhouses were erected in convenient localities in this camp. Each of these buildings is of frame construction, concrete floored, sewer connected, and screened. Coal stoves with coil water heater in each of the bath buildings provide an ample supply of hot water for bathing purposes. Concrete scrub-clothes tables, sewer connected, and with shed coverings, are provided for washing clothes.

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The men in this camp are quartered two or three to the tent, as may be necessary. At one time during the month of December it became necessary for a period of eight days to quarter four men to a tent in about one-third of the camp. Each tent is provided with a fly, is floored, well drained, electric lighted, and provided, since the onset of cold weather, with an oil heater. Each man is provided with a cot. The camp is well drained and has excellent board sidewalks. Weather conditions to date have been unusually mild, but it is believed that the camp as constructed will withstand any weather likely to be encountered. A separate building has been erected containing kitchen and ship's store on the first floor and quarters for the commissary school on the second floor. This kitchen is of excellent design, well equipped, and capable of providing for 5,000 men.

The medical department's portion of this camp consists of dispensary and laboratory. This dispensary not only provides for the care of such men as appear at sick call, but also is charged with the vaccination and administration of antityphoid inoculations to all recruits, which measures are completed during the detention period,

21 days, during which they remain in this camp.

The detention camp will accommodate 4,500 men, and from a sanitary standpoint is very satisfactory. Improvement as a detention camp could be made by its division into groups of 100 men, to enable more complete segregation. Such division would necessitate greatly increased toilet, bathing, and messing facilities.

Weekly lectures on personal and general hygiene and venereal prophylaxis are given to all the men by a medical officer and each re-

cruit is provided with a pamphlet of advice on these subjects.

The sick quarters' building has been improved by the addition of two excellent wards, accommodating 20 patients each, a solarium, diet kitchen, and X-ray room. The mess hall and kitchen have been enlarged and improved. Three isolation buildings for contagious diseases have been completed and occupied. The isolation buildings are of departmental design, well located, fully equipped, and very satisfactory. The new wards in the main buildings are occupied and are highly satisfactory. They are designed to furnish a maximum of ventilation, two sides of each being fitted with "simplex" type windows, so arranged that 85 per cent of one side and one end of each can be entirely opened. Floors are all of maple, with linoleum runners. Lighting is of the semi-indirect type, and very satisfactory. Dressing rooms are rubber tiled with composition wainscoting, and toilets have composition floors and wainscoting. The solarium is over the new mess hall and connected with the surgical ward. It is provided on three sides with windows of the "simplex" type, giving 85 per cent opening, and has a large skylight with blue glass. The value of this type of construction for this climate can not be overestimated, as all windows can be left open 340 days of the year, permitting of practically outdoor treatment.

A tent ward of 12 hospital tents has been erected, in series of 3 tents, fly; 3 tents, fly; 3 tents. These tents have a continuous floor throughout, are framed, electric-lighted, and heated by oil stoves when necessary. This ward will accommodate 66 patients, and is admirably adapted for the treatment of influenza, tonsillitis, and similar diseases, or may be subdivided for the care of contagious cases. Tentage is on hand for the erection of a similar ward of 12 tents if necessary. A group of eighteen 9 by 9 feet wall tents is maintained as a receiving contagious ward where suspected contagious cases, on whom positive diagnosis has not yet been made, are

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h a the detained in isolation for further observation. These tents are floored,

electric lighted, and heated by oil stoves when necessary.

The surgical department consists of a clean surgical ward (one of the new wards), pus surgical ward, operating room, sterilizer room, instrument and dressing room, and surgical dressing preparation room, and is equipped to care for any ordinary type of surgical disease.

Sick quarters accommodation is provided for the following:

Main building	90
Isolation buildings (3)	54
Tent ward	66
Tent ward to be erected if necessary	66
Isolation reception ward	10
	10
Total	

At present the meningococcus detention camp, consisting of mess hall, bathroom, toilet, eight small shacks, and tentage as necessary will accommodate 120 men, and is capable of expansion to accommodate any demand likely to be made upon it.

The total number of venereal diseases for the year has been rela-

tively small, as follows:

Gonococcus infection, all types	392
Chancroid	51
Syphilis	52

This number includes venereal diseases from all sources. Many men reporting on the receiving ship from the Asiatic station have venereal disease upon arrival, and a large percentage of cases of gonococcus infection of urethra are among recruits reporting on the station with the disease already developed upon arrival. The above figures show that of all men passing through the station and receiving ship 15.5 per thousand were treated for gonorrheal infections, 2.02 per thousand for chancroid, and 2.02 per thousand for syphilis. The total sick days for the year were 37,788, of which number 2,199, or 5.82 per cent, were for venereal diseases. Nineteen hundred and eighty-one men presented themselves for prophylactic treatment. A considerable number of men are beginning to avail themselves of the venereal prophylactic treatment offered at the various emergency hospitals throughout the city of San Francisco.

The health department of the city of San Francisco is cooperating with the medical officer to the fullest extent, and daily reports of communicable diseases are exchanged. When able to ascertain from a man infected with venereal disease the address of the woman by whom he has been infected, the medical officer reports the case to the health officer of San Francisco, the woman is apprehended and examined, and if found to be infected with venereal disease is committed by the court to the custody of the health department for

treatment until cured.

Upon it being reported to the commandant that a large percentage of the cases of gonococcus infection were contracted through acquaintances made at two local dance halls, the situation was represented to the provost marshal in San Francisco, and these dance halls were temporarily declared "out of bounds," pending more careful surveillance of their patrons.

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has 27, cing to porti vacci were The work of the psychiatric unit has been of the greatest value. All recruits are examined by the psychiatrist, and either passed, continued for further observation, or held for survey. The psychiatrist is present when "mast" is held, and all chronic offenders, or apparent delinquents, are thoroughly investigated. This clinic has resulted in the survey and discharge from the service of the following:

The state of the s	1000
Constitutional inferiorityConstitutional psychopathic state	0
Constitutional psychopathic stateEpilepsy	1
Epilepsy	1
	10
	1
	5
NeurastheniaNeuritis	3
	2
	1
	2
	1
Stammering	1
77	2.

Navy Yard and Station, Mare Island, Cal.—Two distinct eras, influencing health, existed during the year, that prior to the declaration of war, and that subsequent thereto. The influence of the concentration of large numbers of men from all parts of the United States gave rise to a rapid increase in the incidence of diseases subsequent to the declaration of war. This was augmented by the fact that proper provision for the care of these large numbers of men in the early stages could not be made fast enough. Previous to this concentration, health conditions on the station were normal as compared with previous years.

As at all other stations in the United States subsequent to the declaration of war, the problems of sanitation were those developing from rapid expansion, but in spite of this, even at the worst period, conditions were good, and, in spite of great obstacles, they have steadily improved, and at the time of writing this report are now bordering upon excellent.

The habits of the men have been uniformily excellent, especially when it is considered that the percentage of young untrained men has been so large, combined with a shortage of trained men available for instruction purposes. It is considered worth special notice that among the large influx of personnel a very small fraction of 1 per cent were found to be drug users, and the bulk of the men appear to appreciate the necessity for keeping in excellent physical condition during the present national emergency, are very amenable to instruction, and take advantage of the facilities offered to prevent their engaging in dissipations which are ever present to tempt them during their idle moments.

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U. S. Submarine Base, San Pedro, Cal.—The complement consists of 525 officers and men; percentage of sickness, 18.6; mortality, 4.3 per cent. This high rate is due to an accident on December 17, 1917, causing the death of 19 men; the general health of the station has been excellent. The total number of venereal cases treated was 27, of which 13 were syphilitic, 9 having been infected before reporting to this station, 13 were genorrheal, 5 of them infected before reporting to this station, and 1 was chancroidal. Fifteen cowpox vaccine inoculations and 117 typhoid prophylaxes were given. There were 6 cases of measles.

The grounds are filled in chiefly from the dredgings of the bay, an asphalt-covered concrete street about 100 feet wide is the main thoroughfare, and the grounds projects out into the bay about one-half mile from the mainland. The buildings are of reinforced steel concrete on a pier built by the city of Los Angeles as a municipal wharf warehouse. One-half of the main building projects over the water and the other half is on filled-in ground. The sleeping quarters are well ventilated, spacious, and easily kept in sanitary condition, ventilated from the sides and overhead. The bunks are doubledecked iron framed, with two bunks to a section, which can be removed with the bedclothing and be sunned. The working quarters are divided into their respective divisions by wooden partitions 10 feet high; the officers' quarters are divided into single rooms and are well furnished. The officers' galley is sanitary and well equipped and furnishes food to two messes, one for the senior officers, and one for the junior officers. The galley for the crew is large and well equipped and has a maximum capacity for preparing food for 750 men. The floors of both galleys are tiled and the sides and overhead well screened. The crews' messroom is floored with boards, and the tables and benches are made of soft pine. The general mess system is used for serving food to the crew; the dishes are washed on the tables on which the food is served, as the scullery is not in use at present. A bakery has been installed, which furnishes a good quality of bread and pastry. There are several small ice boxes, which are sufficient for refrigeration of a few days' rations. The crews' showers, wash room, urinals, and laundry, officers' showers, urinals, and heads are in the main building and drain directly into the bay. The crews' head is located about 250 feet from the main building, being a wooden structure with a concrete floor, and containing 30 seats over galvanized troughs flushed with continuous flow of water, draining through pipes into the bay about 75 feet distant. The waste from the table is hauled away in wagons by the city of San Pedro. An incinerator is being put up to burn all waste and garbage. There is no heating in the crews' sleeping quarters, as the climatic conditions do not require heating. The heating system for the officers' quarters, the sick bay, mess rooms, offices, and working quarters is the plenum blast system plus a low-pressure steam boiler gravity system, having a capacity of 30,000 cubic feet of air delivered per minute, This system is now being finished, but no trial has been given it here. The water supply is furnished through the city of Wilmington, Cal., and is good both in quality and quantity. A system has been installed for heating water, which is satisfactory. The bathing facilities are ample. An electric lighting system is installed throughout the building and grounds. There are gas connections wherever needed.

The sick bay is situated in that portion of the main building extending over the water. There are 16 beds in the sick bay, which is sufficient for the present complement. The dispensary is adjacent to the sick bay and is well equipped. The operating room is connected with the sick bay by a large double door, the surgeon's preparation room connecting direct to operating room. The operating room has one large operating table, solution stand, instrument stand, and dressing tables. There is one instrument sterilizer, two large water tanks for hot and cold water, one high-pressure steam

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sterilizer (autoclave), and hot and cold running water faucets. The surgeon's preparation room is equipped with washbasins with foot control, hot and cold water, lockers for poisons, dressings, and narcotics. The operating room is well equipped for any operation. Venereal treatment and prophylaxis room is close by the sick bay. All quarantine cases are placed in the quarantine camp of the naval reserve training camp, which is on the same grounds as this

THIRTEENTH NAVAL DISTRICT.

The thirteenth naval district includes five section bases, each provided with one or more medical officers and a sufficient number of hospital corpsmen, with the exception of the Alaska base, which has been visited by a medical officer in connection with enrollment and the necessary vaccinations. The thirteenth naval district, of course, includes the navy yard, Puget Sound, Wash.; the naval training camp at Seattle, the naval training camp at the navy yard, Puget Sound. The detention camp established in April, 1917, serves both camps. The work at the yard and at the camps engrosses the whole time of two dental surgeons and a female assistant. During the six months that terminated December 31, 1917, there have been over 200 dental treatments of one kind or another. The following additions and improvements affecting the medical department have been made at the navy yard:

Erection of a building containing disinfecting plant in connection with reception of recruits.

Enlargement of dressing room at dispensary.

Extension to board of labor building for physical examinations to relieve othe overcrowding at the yard dispensary.

Bacteriological laboratory.

Department for special work in connection with diseases and injuries of the

A medical officer has been detailed for duty with the marines (482 officers and men) instead of having marines go to the hospital and consult the officer of the day there. The medical aid to the com-

mandant says in his report:

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"There are at present attached to the navy yard in connection with the thirteenth naval district 101 enlisted females. These girls are living in houses situated in Bremerton and Seattle, Wash. In some instances the hygienic conditions under which they exist are bad, particularly with respect to ventilation, which is defective, due to overcrowding and improper and insufficient bathing facilities. Often two girls occupy one small, poorly ventilated room, and of Late quite a number have come down with mumps, measles, and tonsillitis. Under present conditions it is not possible for the medical department charged with the responsibility and care of the health of the enlisted woman to do much toward disease prevention. If the enlisted woman has come to stay, it appears reasonable that consideration be given to this question. I have to propose the erection of a building, in the nature of a barracks, on the naval reservation, for the purpose of housing female enlisted personnel. It is realized that this suggestion is fraught with novel possibilities, but it is believed that the best interests of the service demand more careful regulation of the living conditions and movements of this new naval adjunct.

"On July 24, 1917, authority was granted for the establishment of a bacteriological laboratory in connection with the thirteenth naval district, and \$2,500 was allowed for this purpose. Delay in equipping was inevitable, but by September, 1917, the completion of the necessary alterations in the building set aside for the purpose, and the arrival of necessary supplies, permitted a start. Lieutenant J. C. Ruddock, Medical Corps, United States Navy, is in charge of the laboratory under the supervision of Surgeon B. J. Lloyd, United States Public Hospital Service, and the medical aid.

"Up to November 1, 1917, throat smears from 1,335 men were made on glass slides. These smears were stained by the Gram method and examined microscopically. All men showing Gram negative diplococci were isolated and cultures were made from each nasopharynx

on dextrose-serum-agar. No carriers were found.

"On November 1 the method was changed, cultures being made directly from the naso-pharynx. During the month of November 239 men were examined, the cultures were grown on dextrose-serumagar, suspicious colonies were picked up and isolated, and all those found to be Gram negative diplococci were again inoculated into glucose-dextrose-serum-agar. If no fermentation developed, these were considered negative for meningococci; if fermentation presented agglutination was performed to corroborate findings. No organisms were found that fermented dextrose.

"During the month of December cultures were made from 250 men, of which number 144 were new recruits. Agglutination of all Gram negative diploccocci found was attempted. No carriers were

found.

"Considerable time, thought, and labor has been devoted to the venereal question and vice situation by the medical aid and the sanitary advisor and inspector. The problem has been attacked by the following methods:

"Campaign of education: (a) By means of frank talks to the men at various times; (b) distribution of printed advice; (c) posting of placards, directing attention to dangers from illicit intercourse.

"Prophylactic stations were installed at the training camp, navy yard, Puget Sound, at the training camp, Seattle, Wash., and on the Colman Dock in Seattle, Wash. The latter place is the point of departure and arrival to and from Bremerton and Seattle. The station is easy of access to anyone leaving Seattle for Bremerton, is manned by three hospital corpsmen and a pharmacist, and is open at all times. The men understand that they must take prophylactic treatment after exposure. They have been impressed with the necessity of early treatment. Men who develop venereal disease and whose names do not appear in the records of prophylaxis are disciplined. Instructions similar to the above were forwarded to all the medical officers at section bases, and as an additional factor it combatting the disease bimonthly inspections are made for the pur pose of discovering concealed cases.

"The question of arrest and segregation of prostitutes was taken u with the Seattle authorities and on November 9, 1917, the first arres was made. Since then 211 women have been arrested and detaine pending the result of Wassermann and microscopic tests. Of the rious number 136 were found infected and incarcerated in the city hospitatrom where they will be treated until it is believed they can no long bringi

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convey infection. Considerable opposition to this procedure developed at first. An attempt to release women detained for syphilis and gonorrhea on the ground that the State laws and regulations did not specify these diseases as 'infectious and contagious' was met by the State board of health in the form of regulations passed December 17, 1917, naming syphilis, gonorrhea, and chancroid as infectious and contagious and requiring all such cases to be reported to the local health officers, who in turn must report to the State commissioner of health. Habeas corpus proceedings were instituted in 15 cases, but upon the showing that the prisoners had not exhausted their legal remedies, such writs were denied. Immediately upon this denial appeals were made to the State board of health, which in cases where the diagnosis of the city or county health officer is questioned renders a 'final' decision, directly or through an 'expert' appointed as arbiter. In all these cases the diagnosis of the city health officer has been sustained, and as yet no further proceedings have been attempted. It is possible if habeas corpus proceedings are instituted, after a decision has been given by the State board of health, that the city health officer may be required to show that his action in detaining these people is reasonable, until their legal status is finally determined.

"The following is a history of the vice crusade in the State of Washington: Ordinance 32444 was passed in November, 1914, providing for the examination of prostitutes. This was never repealed but had not, until recently, been enforced. November 19, 1917, ordinance 37928 was passed, amending sections 6 and 10 of December 17, 1917. A regulation was adopted by the State board of health requiring all cases of venereal disease to be reported by name, initial, or serial number. On January 8, 1918, regulations governing the observation and quarantine, when necessary, of these cases, were adopted. In this State the constitution gives the State board of health quasi-legislative powers, and its regulations have the force

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ospital longe "Male offenders, particularly those who traffic in women, are now receiving attention. To date 34 have been arrested, and those having venereal disease are treated in the same manner as the women; much credit is due Surgeon B. J. Lloyd, United States Public Health Service, for his efforts directed toward and the results obtained in connection with the segregation of infectives and the adoption of

the regulations referred to above.

"The board of health, thirteenth naval district, was organized by the commandant's order of July 29, 1917, upon the recommendation of the medical aid and sanitary advisor and inspector. The personnel of the board of health is constituted as follows: President, commanding officer naval hospital, navy yard, Puget Sound; executive officer, medical aid to commandant. Members: Sanitary advisor and inspector; senior medical officer, naval training camp, Seattle, Wash., civil engineer (head of department of public works). Member and recorder, senior medical officer, receiving ship (naval training camp, navy yard, Puget Sound).

"The necessity for the coordination and cooperation of the various medical departments, thirteenth naval district, was apparent from the time of the district's organization, and it was believed that bringing together the responsible heads of these departments from

time to time for the discussion of all matters pertaining to the health of the personnel and sanitation in general would be most apt to produce best results. It was further believed that recommendations made after deliberation by a board of this character would be more likely to bring about a correct solution of such problems as might arise from time to time, and that such recommendations would inspire more confidence in those charged with the duty of acting upon them, and consequently more efficient cooperation in carrying out its

recommendations would be secured. "It may be stated that the care of the personnel in this district necessitates the division of this work into a number of more or less independent units, a condition which no doubt obtains in most if not all other districts. It is also true that measures for maintaining the health of this personnel and the sanitation of camps, barracks, buildings, etc., are closely interwoven with practically all the activities of the different departments. It was found that individual consultations with the heads of these departments often involved inconvenient interruptions, and furthermore that they must needs be multiplied indefinitely in order to secure proper coordination. The proposal to have representatives from each unit or department meet at stated or called conferences under a formal organization met with immediate approval. After an experience of nearly six months it is not too much to say that the board of health has amply justified its existence. Among the questions considered and acted upon by the board of health may be mentioned these:

(a) Water supply.

(a) Water supply.

(b) Disposal of stable refuse.

(c) Change in the construction of drinking fountains.

(d) Establishment of as small units as possible for men in detention. (e) Educational measures with reference to venereal disease.

(f) Measures tending to protect employees from accident incident to their duties.

(g) A system of reporting all contagious disease of all units and employees to the board of health daily.

Wo (h) Establishment of a bacteriological laboratory. a stablishment of a bacteriological laboratory.

(i) The establishment of a prophylactic station in Seattle.

(j) Provisions for housing, clothing, and messing; particularly the arrangement whereby overcrowding is prevented.
 (k) The inauguration of educational and other measures tending to dimin-

ish vice and venereal disease in districts surrounding Navy encampments. (1) Installation and routine of disinfection of clothing, etc., when necessary.

(m) Measures for the prevention of the sale of drugs to enlisted men.

(n) Inspection of dairies supplying milk in this vicinity.(o) Examination of rats for plague infection.

"These and many other questions have been considered from time to time. It is understood, of course, that many of these matters were worked out by men in charge of different divisions, but to the board as a body is due the credit of coordinating this work satisfactorily

and often of determining the policy to be followed.

"A plan of cooperation between State and local authorities, the Navy and the Public Health Service, has been agreed upon whereby two sanitary inspectors, paid by the Public Health Service, will be tents, detailed to work in the districts mentioned, these men being under of hea the direction of the administrative officer of the Public Health Servequipm ice detailed to this work (who is also State commissioner of health The he but reporting daily, if necessary, to the medical aid to the command Each n The latter has been appointed deputy State health officer,

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order to facilitate this work. One of the inspectors to be assigned to duty is a qualified dairy inspector. The State health commissioner will ask the American Red Cross for a knockdown, portable hospital for Bremerton. Work will be begun along the lines indicated

immediately.

"Recruits began to arrive at the training camp, Navy Yard, Puget Sound, in increasing numbers early in April, and were housed in tents. Early in June ground was broken at the extreme western end of the yard, and the erection of the new seaman barracks commenced. On October 16, 1917, recruits were first quartered in barrack build-Eight separate units at present constitute the camp proper, each unit being complete in itself, as far as sleeping quarters, kitchen, mess hall, wash rooms, and toilets are concerned. Steam is used for heating. The barrack buildings proper are 150 feet long, 18 feet wide, and 14 feet from the floor to the peak of the roof. Each building is supplied with 34 windows, 34 by 36 inches, which with three large ventilators, placed in the roof, will afford ample ventilation. Eleven 100-watt Mazda drop lamps, arranged in the center of the building, furnish ample light. The air space per capita, when 48 recruits occupy one of these buildings, is 538 cubic feet. Floors are scrubbed biweekly with a $2\frac{1}{2}$ per cent cresol solution. The medical building was placed in commission December 18, 1917. Double bunks were originally installed. Upon recommendation of the board of health, subsequently approved by the Bureau of Medicine and Surgery, the number of men assigned to each dormitory has been limited to 50, and only the upper bunks thus far used.

"It is regretted that it has been impossible to separate the cases of German measles from measles, in connection with the training

camp, Navy Yard, Puget Sound.

"Twenty-five men were found suffering from venereal disease on arriving at the Seattle training camp in August, 1917. Syphilis has not been observed at this camp. Of 187 men with gonorrhea, whose cases were recorded at the training camp, Navy Yard, Puget Sound, during the period, July 14, 1917, to December 29, 1917, 60 were found infected on arrival or developed the disease in quarantine within a short time afterwards. Analyzed, this means that 60 men in civil life were infected in a relatively short period of time as against 127 men during the period (July to December).

"From a study of the above data and having in mind Kipling's remark that 'Single men in barracks do not grow to plaster saints' it seems equally true that single men in civil life are not one whit better than they should be. We are further justified, I think, in concluding that there is at present, at least, a rather marked tendency

toward improvement in favor of the enlisted man.

Shortly after the establishment of a training camp on the grounds of the University of Washington (naval training camp, Seattle), it was realized that its life would be much longer than was at first anticipated, and that the camp would be continued throughout the winter. The question of the advisability of quartering the men in tents, or of constructing barracks, was referred to the district board ing under of health and this body, after carefully considering the location and alth Serve quipment, voted unanimously to continue the men under canvas. of health The health of these men in tents has been most excellent to date. command Each man has four blankets and tents are provided with oil stoves,

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the use of which has been carefully regulated. While it is true that the weather has been very mild (it usually is in this vicinity), there has been a great deal of rain, and it is a satisfaction to be able to state that no inconvenience has been experienced. It is believed that the breaking up of this command into small units is in a meas-

ure responsible for the low sick rate."

The average number of civilian employees in the Navy Yard, Puget Sound, was 2,657. During the year 4,680 vaccinations were performed among the civilian employees. Prospective employees to the number of 8,418 were given physical examinations during 1917, an increase of nearly 600 over the previous year. Medical treatment was given to civilian employees as follows:

Miscellaneous	38
Lacerated, infected, incised, and punctured wounds	1,905
Concussions and abrasions	1,683
Removal of foreign body in eye	1,204
Burns	360
Sprains, fractures, and dislocations	185
Amputations	2

Navy Yard, Puget Sound, Wash.—During the last of the month there has been an epidemic of influenza of a nonvirulent type in the detention camp. This occurred coincident with the shutting down of the water supply due to working on water mains, and may be directly traceable to this, because the water pressure of the drinking fountains was very low. All cases or suspects were placed in bed under guard, gauze screens were put between the beds, and patients were instructed to cough and sneeze on gauze pads. Drinking fountains were swabbed five times daily with a solution of 5 per cent phenol. Sudden and complete subsidence of the epidemic was noted

in three days.

Receiving ship, Puget Sound.—The number of men aboard has fluctuated widely during the year. The excellent health of the complement can be attributed in large measure to the fact that, to obviate the evils of overcrowding, a camp was established on the golf links overlooking the sound, whither new arrivals were sent and housed. 3 men to a tent, with ample space between tents. Upon the opening of the new seamen's barracks 214 men from Great Lakes were quartered there and 4 cases of cerebro-spinal meningitis developed. following measures were taken to prevent the spread of the disease: Tent mates and suspects were isolated; tents were turned inside out. and exposed to the sun; floors were scrubbed with 1-100 bichlorid solution; all men had their throats and noses swabbed twice a day with Dobell's solution; the men in the detention camp occupied the barracks during the entire winter of 1917-18. They had ample clothing and bedding, and oil stoves gave adequate heat. Not a case of pneumonia developed among them. Each of the men in a barrack building had 538 cubic feet of air space. A venereal clinic was established in the detention camp, and all venereal cases were isolated there and treated until well.

FOURTEENTH NAVAL DISTRICT.

U. S. Naval Station, Hawaii.—The station consists of the station wear, ow. at Pearl Harbor, a station in Honolulu on the water front, and out enlisted was for g lying radio stations on Oahu, Kauai, Molokai, Maui, and Hawaii.

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The water supply for the station at Pearl Harbor is pumped directly from artesian wells, and repeated tests have shown a very low bacterial count. The station is adequately equipped with a sewage system and waste is properly disposed of. In this climate, where the thermometer seldom goes over 90 F. or below 70 F., and there is no necessity for overcrowding, the problem of heat, light, and fresh air is easy to solve, and so far there have been no cases of pneumonia. The venereal diseases are the most prevalent, and vice conditions in Honolulu are very bad.

DISEASES OF SPECIAL INTEREST.

CEREBRO-SPINAL FEVER.

During the summer of 1917 cerebro-spinal fever, which had been quite prevalent in the Navy during the spring, after the beginning of mobilization became sporadic, and the comparatively few cases which occurred at the naval training stations in Newport, R. I., Charleston, S. C., and in the fleet were traceable to previous outbreaks at Great Lakes, Ill., and Norfolk, Va., while 12 cases occurring at the naval training camp, San Diego, Cal., were traced to the naval training station, San Francisco, Cal. The spread of this disease from the principal training stations could not be prevented because of the imperative demand for additional men in the fleet and the inadequate detention facilities for the increased number of recruits. During the autumn very few cases occurred either ashore or afloat. From the summer on a vast amount of laboratory work was done in connection with the detection of meningococcus carriers, and following the experience of the British and recently adopted views in this country the policy of isolating and treating all carriers was pursued.

In December unforeseen results followed the selective draft act. It was thought that this law would prevent the Navy from securing acceptable men of draft age after 12 m. of December 15, and recruiting was so intensified that all training stations and camps suddenly became filled with raw recruits far beyond their proper capacity.

More than 10,000 recruits entered the Great Lakes Training Station in less than weeks despite the fact that detention facilities could accommodate only 3,450 at that time. The detention system broke down completely for several weeks. At times the stay of recruits in detention was reduced to approximately five days, after which they were transferred to the main camp, where they were housed in large groups with less than 30 square feet of floor space instead of the 50 square feet per man allowed in the detention camps. The usual care and supervision which recruits ordinarily received during the normal period of detention were lacking. After transfer the excellent system of intensive training in vogue at Great Lakes was begun at once. Almost coincidently two severe blizzards occurred, a week apart, with unusually heavy snowfalls. At the same time it was impossible to fit all recruits with overshoes and heavy underwear, owing in part to the fact that an older class of men was being enlisted during this rush period, and hence the principal demand was for garments of unusual size. In addition to active training

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In January the natural results followed; outbreaks of cerebrospinal fever, measles, pneumonia, and other communicable diseases occurred, principally among the men who were recruited in December. Three regiments especially suffered heavily. Two of these, in which 21 and 25 cases, respectively, of cerebro-spinal fever occurred were most affected. The last of the three regiments to be recruited suffered less because the importance of fatigue was better recognications.

nized. Thirteen cases developed in this regiment.

Epidemiological study of these outbreaks showed that the incidence of carriers of meningococci and pneumococci and the incidence of the diseases must be considered separately. Neither necessarily follows where carriers are found, other factors being essential for outbreaks of either disease. Overcrowding is the outstanding and most important of these, while other infections, age, exposure, fatigue, mental depression, digestive disturbances, and unsuitable clothing, individually or collectively, undoubtedly play an important rôle. While being subjected to several or all of these factors the recruits were vaccinated against smallpox, typhoid fever, and the paratyphoid infections, and many of them also received the Schick test and toxin-antitoxin immunity against diphtheria. While these procedures are of inestimable value in saving life by preventing disease, and cause no serious ill effects when carried out during the normal detention period, it is possible that they may have been a contributing factor in lowering resistance under the circumstances enumerated. The well recognized necessity of administering these immunizing agents is in itself a strong argument for an unbroken period of incoming detention with light work before intensive training begins. Then, too, the recruit upon entering a naval training station, particularly in the winter time, must adapt himself to a complete change of habits and environment. He must become accustomed to navy discipline, learn to take care of himself, become accustomed to a radical change in apparel and to a change in diet; must learn to sleep in a hammock in barracks, make new acquaintances, and probably overcome a certain amount of homesickness and transient depression of spirits. Experience shows that these changes must be brought about gradually because they all have a decided influence in tending to lower resistance to communicable diseases.

The circumstances attending the outbreak at Great Lakes was aptly summarized by the senior medical officer of that station in the statement that "the attempt to make a sailor too rapidly is to invite disaster."

The history of the outbreak shows that comparatively few cases of communicable disease developed among recruits during the first three weeks of service and that the incidence of both cerebro-spinal fever and pneumonia reached its height between the fifth and seventh weeks. Indeed the most striking parallelism in the incidence of these two diseases was observed both at Great Lakes, III., and Norfolk, Va

Shortly after the heavy snowfalls at Great Lakes there was wide prevalence of bronchitis and coryza, and among the recruiregiments this was followed by outbreaks of the more serious communicable diseases of the respiratory type.

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Similar outbreaks occurred at the Norfolk Naval Training Station at St. Helena, where exposure was even greater because of poorer housing facilities and lack of heat and ventilation. The weather in Norfolk was unprecedented and the bungalows in use were not designed for severe winter weather. The same sequence of events noted at Great Lakes occurred here; serious overcrowding; a complete temporary break in the detention system, difficulties in the matter of clothing, wide prevalence of coughs and colds, rapid multiplication of meningococcus carriers in the station, and the appearance a week or two later of cases of cerebro-spinal fever and the pneumonias here and there in groups scattered all through the station. Measles and mumps increased at the same time. All these diseases were carried into the naval training station at Hampton Roads, Va., by transfer of recruits.

Shortly after the outbreak of cerebro-spinal fever at Great Lakes 10 cases occurred in a draft of men transferred from that station to the training camp at Charleston, S. C.—1 case en route and 9 shortly after arrival. Only two cases appeared in the Charleston personnel; one in a man who took the histories of patients as they came in and the other in a trained nurse in the naval hospital. In spite of a large number of carriers in the draft the disease did not spread. It may be noted that the factors operative at Great Lakes and Norfolk were absent here.

The winter and spring months passed without any other outbreaks of this disease, although as was to be expected in view of its prevalence in the civil population and the unusually high percentage of carriers at large, the disease continued to be reported from time to time from shore stations and ships, although not in epidemic form.

Cerebro-spinal fever is a carrier-borne disease. The carrier is an important and essential factor in spreading the disease; however, the carrier problem is most perplexing, and experience during the year has shown beyond doubt that an attempt to prevent introduction of this disease into a naval station by concentrating efforts upon the detection and isolation of meningococcus carriers is doomed to failure. Previous to epidemiological investigations made at Great Lakes in January, 1918, by Commander O. J. Mink, Medical Corps. United States Navy, and his assistants, the belief had gained currency that it was necessary to control all carriers in order to limit the spread of the disease. Experience there demonstrated that the disease could be controlled without isolating carriers. When the detention system broke down it became impossible to detect all carriers, to say nothing of isolating those who were found.

Even with a full period of 21 days for incoming detention at a large training station it is practically impossible to prevent the introduction of carriers into the main training camps. This is due not only to the great technical difficulties in laboratory procedures for the recognition of meningococci, but as well to intermissions in the carrier state. Carriers multiply rapidly under barrack conditions, and much of the success in eliminating them must depend upon the percentage in the civil population, the season of the year, restriction in the number of men quartered in any one compartment, proper allowance of floor area per man, and upon preventing unneces-

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sary points of contact. At best, the percentage of carriers will be higher in the station than in the surrounding civil population. In barracks the bacterial flora of the nasopharvnx tends to become uniform throughout the personnel, as was well shown by Lieutenant Commander M. J. Rosenau, Medical Corps, U. S. N. R. F., and his assistants, working among the receiving ship personnel in Boston, where between 20 and 25 per cent of the recruits living in crowded quarters were meningococcus carriers during the cold weather. In the same period recruits living under good hygienic conditions and eating at the same mess showed about 9 per cent carriers. while students in Boston, both men and women, showed from 1 to 2 per cent. Further investigations among groups of men who had been in contact with cases of cerebro-spinal fever showed that from 6 to 11 per cent became carriers in good hygienic surroundings, while the percentage increased to 20 per cent on board ship, and even to 35 per cent when there was overcrowding.

It has been found that the actual number of cases of cerebro-spinal fever in training stations does not bear any definite relation to the percentage of carriers. For example, at Great Lakes, in certain barracks where 25 to 30 per cent of the men were found to be meningo-coccus carriers, no cases of cerebro-spinal fever developed, while in certain barracks where only 8 or 9 per cent of the men harbored meningococci in the nasopharynx the incidence of the disease was high. In certain instances where the disease occurred carriers were isolated at once; in other cases carriers were left in barracks. New cases failed to develop under both conditions, the other etiological

factors receiving proper attention.

The year's experience has shown that it is futile, in the cold months at least, to hope that meningococcus carriers can be eliminated from naval stations, or, indeed, that their numbers can be materially reduced by attempting to detect and isolate all carriers. When a thousand men are cultured and the carriers are isolated as soon as detected, reculturing of the personnel shows as high and frequently a higher percentage of positives than was found during the first examination.

Routine culturing of all incoming recruits at a naval training station is a hopeless task. Furthermore the procedure is useless, because of the continual reintroduction of meningococci into the station by visitors and returning liberty parties, where the factors operating to promote multiplication of carriers render a high percentage inevitable.

Carriers should not be transferred to hospital. They are perfectly healthy individuals and hospitalization is undesirable, and besides, in most instances, their training need not be interrupted.

The various methods of treatment recommended for meningo-coccus carriers in this country and in England have been tried but none has proved of definite value. It is possible that the systematic use of simple cleansing nasal sprays may have some effect in preventing the spread of the organisms. Weather permitting, carriers preferably should be quartered in tents. The majority soon cease to harbor meningococci under such conditions, separation of the men into small groups doing much to prevent continual reinfection by each other. The influence of warm weather is striking. Experience

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has shown that carriers tend to clear up promptly when the weather is warm enough for them to live in the open air, provided droplet reinfection is prevented. Medicinal agents alone have little or no effect.

Formerly it could be expected that carriers would practically disappear in the month of June, not only from the civil population but from the military as well. Doctors in France find that contrary to its behavior before the war, cerebro-spinal fever now persists through the summer as an endemic affection with small foci, and that

is our experience this year.

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The present policy relating to the control of the disease and disposal of carriers depends upon prompt recognition and early isolation of cases, convalescent patients not being released until after three successive negative cultures from the nasopharynx taken at intervals of five days have been secured. Contacts are quarantined until they have been cultured, those yielding negative cultures being released at once. Carriers found among contacts are segregated in groups as small as possible and detained until three negative cultures have been obtained at intervals of five days. Persistent carriers are reported to the bureau after they have been under observation for a period of two months.

The bacteriological technique involved in the detection of carriers has been simplified and standardized as the result of researches in the United States Naval Medical School and the examination of more than 33,000 cultures in the laboratory at the naval training station, Great Lakes, Ill., where experimental methods were studied in conjunction with the work of Drs. Ludwig Hektoen, George Mathers, and Prof. Edwin O. Jordan of Chicago University. The standard technique resulting from these studies has been adopted by the Army

and the United States Public Health Service.

THE PNEUMONIAS.

Lobar pneumonia and broncho-pneumonia are responsible for more deaths in the Navy than all the other communicable diseases combined.

Between January 1 and July 1, 1918, the pneumonias caused 602 deaths in the Navy; all other communicable diseases including tuber-In these figures deaths from pneumonia following

measles have been charged to measles and not to pneumonia.

This is not surprising since pneumonia is ever present in all parts These diseases are so prevalent and the public is so ccustomed to them that little or no apprehension is excited even in he worst pneumonia months, although year after year they reap an ppalling toll in deaths, whereas comparatively few cases of cereospinal fever create great alarm because of the relative infreency and high case fatality rate of this disease. The causative canisms of both diseases are disseminated in the same way and predisposing etiological factors are identical. The pneumonias ays cause a great many more deaths in the community than cerespinal fever.

he history of pneumonia in the Navy during the past year onstrates conclusively that the predisposing etiological factorscrowding, exposure to inclement weather, minor catarrhal infections of the respiratory tract, fatigue, and clothing unsuited to the weather-play the most important part in exciting pneumonia as well as cerebro-spinal fever. Undoubtedly there are also the most important factors in civil life. Overcrowding occurs in street cars,

railroad stations, places of public amusement, and shops.

Where outbreaks of the pneumonias and cerebro-spinal fever have occurred simultaneously at naval stations, as at Great Lakes and Norfolk, there has been a striking parallelism in the incidence of both infections. Of course, pneumonia in various forms has appeared in many places where there has been no cerebro-spinal fever as was to be expected in view of the relative frequency of the two diseases in civil life.

Quite naturally pneumonia has been reported from most of the shore stations and from many of the ships, although nowhere has either lobar pneumonia or broncho-pneumonia assumed epidemic proportions except at San Diego, Cal., and during the outbreaks at Great Lakes, Ill., and Norfolk, Va., mentioned under cerebro-

spinal fever.

At the naval training camp, San Diego, in a complement of 4,200, 34 cases of lobar pneumonia with 7 deaths, and 15 cases of broncho-pneumonia with 10 deaths occurred in the months of January and February, 1918. Of these, 8 followed measles and 7 of the latter died. This outbreak illustrated the danger of using large buildings as barracks even in a most favorable climate. The case fatality rate for pneumonia at San Diego in these two months was 34 per cent. Forty-five cases were typed, as follows: Lobar Broncho

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FTT	T phoumococci	40	1
Type	I pneumococci	16	1 1 1 1 1 1 1 1
Marina	II pneumococci	~	1
Type	11 pheumococci =====	5	1
rm	III pneumococci		0
Type	III pheumococci	4	5
TT I	TV (doubtful)		
Type	IV (doubtful)		
-01-			0
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The streptococcus did not play a prominent rôle in this outbreak although empyema was a sequel in 15 cases, causing 10 deaths Empyema followed in 5 Type I cases, 8 Type II cases, 1 Type II case, and one of doubtful type.

The most recent figures for the Great Lakes station are the fol

lowing:

The transmitted of the section	Lob	ar pneum	onia.	Broncho-pneumonia.			
1918	Cases.	Deaths.	Mortality.	Cases.	Deaths.	Mortali	
First quarter. Second quarter. Six months	224 105 329	28 14 42	Per cent. 12.0 13.3 12.8	109 36 145	38 1 39	Per ce	

The complement of the training station during this time var from 24,000 to 35,000. From November 1, 1917, to March 1, 1, tolk hos covering the principal pneumonia months, 222 cases of pneumococo measl lobar pneumonia, and 40 cases of broncho-pneumonia were admilital fol to the naval hospital at Great Lakes.

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Of the 222 lobar pneumonia cases 15 died, giving a case fatality rate of 6.7 per cent. Ten of the deaths were due to uncomplicated pneumonia; 2, to pneumococcus meningitis; 1, to gastric ulcer; and 2 to complicating broncho-pneumonia followed by empyema. Of the 222 cases, 7 per cent were followed by empyema, 5 per cent by otitis media, and 3 per cent by serofibrinous pleurisy. Fifty-four of the 222 cases received therapeutic antipneumococcic serum, either Type I or polyvalent. Among these the case fatality rate was 7.4 and the percentage of complications was higher than for the series as a whole. Empyema occurred in 11 per cent of the 54 cases. Obviously this experience with therapeutic serum was not

altogether satisfactory.

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10nia. Mortali Per ce

The occurrence of a certain number of cases of pneumonia in nearly every month of the year at a large station is inevitable. Observations at Great Lakes demonstrate the serious effect of slight exposure to cold and dampness when large bodies of men are subjected to such influences at the same time. In one instance the brigade was kept in formation in a raw wind for a considerable length of time because of delay in the arrival of a distinguished visitor. The next week showed a marked increase in the number of admissions to the sick list for pneumonia. Upon another occasion during preparations for making one of the celebrated Great Lakes group emblematic photographs many of the men threw themselves upon the damp grass and this was likewise followed by the appearance of a considerable number of cases of pneumonia. There is nothing new about this, but cause and effect can seldom be put together so conclusively.

The outbreaks of pneumonia at Great Lakes and in both stations at Norfolk occurred at the same time following the previously mentioned period of hurried recruiting in December. Pneumonia was not prevalent in the Navy during the fall of 1917, nor indeed until after the first of January, but since then this has been an exceptionally

bad year for pneumonia throughout the country.

The naval hospital, Norfolk, Va., and the naval hospital, Hampton Roads, Va., received practically all of the cases from the naval stations in that vicinity as well as patients from a large personnel afloat. The statistics for these hospitals are as follows:

	Lob	ar pneum	onia.	Broncho-pneumonia.				
1918	Cases.	Deaths.	Mortality.	Cases.	Deaths.	Mortality.		
First quarter: Naval hospital, Norfolk, Va Naval hospital, Hampton Roads	181 35	28	Per cent. 15.46 14.28	75 9	24	Per cent. 32. 0 33. 3		
Second quarter: Naval hospital, Norfolk, Va Naval hospital, Hampton Roads	69 17	13 3	18.8 17.6	7	2	28.6		
Total for 6 months	302	49	16. 2	92	29	31, 8		

In the first quarter 15 of the broncho-pneumonia cases at the Norme vi olk hospital and 2 at the Hampton Roads hospital were secondary ch is measles; likewise 9 cases of lobar pneumonia at the Norfolk hoseumocatal followed measles; whereas discontinuous and the Norfolk hoseumocatal followed measles; whereas discontinuous at the Norfolk hoseumocatal followed measles; whereas discontinuous and the Norfolk hoseumocatal followed measles; whereas discontinuous at the Norfolk hoseumocatal followed measles at the Norfolk hoseumocata eumocetal followed measles, whereas during the second quarter none of the admittal followed measles, whereas during the second quarter none of the admittal followed measles, whereas during the second quarter none of the admittal followed measles, whereas during the second quarter none of the admittal followed measles, whereas during the second quarter none of the admittal followed measles, whereas during the second quarter none of the admittal followed measles, whereas during the second quarter none of the admittal followed measles, whereas during the second quarter none of the admittal followed measles. Incident to an epidemiological investigation conducted in February a series of 147 cases of primary lobar pneumonia and 33 cases of primary broncho-pneumonia admitted to the Norfolk naval hospital between December 1, 1917, and February 15, 1918, were found to have given a case fatality rate of 4.83 per cent for lobar and 9.1 per cent for broncho-pneumonia. In addition to these there were treated during the same period 24 cases of lobar pneumonia and 60 of broncho-pneumonia as complications or sequelæ of other diseases, including 5 cases of lobar pneumonia and all 60 of the broncho-pneumonia cases which were secondary to measles. Of the secondary cases 4, or 80 per cent, of measles lobar pneumonia and 30, or 50 per cent, of measles broncho-pneumonia died. Suppurative pleurisy followed in 41 cases with 10 deaths.

The combined series of primary and secondary cases, both diseases, 264 in all, gave a death rate of 21.9 per cent, a rate very close to that for the combined diseases in the first quarter of 1918, which includes March, the worst pneumonia month during which the case fatality rate was 20 per cent.

Types of Pneumococci.—It has not been possible to type pneumonia in routine practice, but a series of 362 cases typed at various naval hospitals is probably representative.

Pneumococci.

bits over Jud at the stations and resource a	Cases.	Type I.	Type II.	Type III.	Type IV.	Pneumo- coccus plus strepto- coccus,	00000110	Strepto-coccus.	Strepto- coccus hemolyt- icus.	Nega- tive.
Great Lakes. League Island Chelsea San Diego Hampton Roads	120 68 100 37 37 37	6 11 14 12 10 53	7 4 15 16 9 51	0 9 2 5 0	20 34 67 2 17	8	16 5 2 1	30 5 2 37	18	15

It appears that Type IV organisms constituted more than 50 per cent of all pneumococci relegated to type. The whole series gives percentages similar to those determined at Fort Riley, Kans., and elsewhere during the past season. On the other hand the small series at San Diego gave percentages which agree pretty well with the findings at the Rockefeller Institute. The figures for the hospitals at San Diego and Hampton Roads were derived from report of pneumococcus cases only. It is not to be understood that streptococcus cases did not occur, but separate reports from these hospitals indicate that the incidence of streptococcus infections was not great

Therapeutic use of antipneumococcic serum.—At the Naval Hopital, Chelsea, Mass., the 14 cases of Type I pneumonia were treated with serum and gave a mortality of 7.2 per cent. This low rate was attributed to the use of serum, but in the Naval Hospital, Leagusland, Pa., where all the Type I cases, 11, were so treated, 2 diagiving a mortality rate of 18.2 per cent. Antipneumococcic shave not been used in a sufficiently large series of cases in the Navat of the Navarant definite conclusions, but from analysis of results obtain in small series at various stations involving very different climater.

conditions and environments it would appear that neither Type I nor polyvalent serum has had any marked influence on the case

fatality rate.

Empyema following pneumonia.—During the past season empyema as a complication of pneumonia occurred in the Navy, as it did elsewhere, in an unusually high percentage of the cases. At the Naval Hospital, League Island, Pa., in 107 cases of lobar pneumonia, empyema was a sequel in 27 cases or 25.2 per cent. These 27 cases were all caused by pneumococci.

Empyema occurred in 49 or 34.2 per cent of 140 cases reported from the naval hospital, Chelsea, Mass. The streptococcus hemolyticus was isolated from two of these; pneumococci were responsible for the others, 51 per cent of which were due to Type IV pneumococci.

At the naval hospital, Great Lakes, between January and July 1, 1918, empyema developed in 69 or 20.2 per cent of 341 cases of lobar pneumonia, and in 16, or 23.8 per cent, of 67 cases of broncho-pneumonia.

The types of infecting organisma are shown in the following table:

EMPYEMA CASES AT GREAT LAKES.

Pneumococci.

	Cases.	Type I.	Type II.	Type III.	Type IV.	Type not deter- mined.	Pneu- mococ- cus plus strep- tococ- cus.	Strep- tococ- cus.	Strep- tococ- cus hemo- lyticus.	Nega- tive.	Not deter- mined.
Empyema following lobar pneumonia Empyema following broncho-pneumonia.	69 16	2 0	1 0	0	2	12	3	26	15	6	2

The largest number of empyema cases admitted to any one hospital during this half year, were reported from the naval hospital, Norfolk, Va., where 128 cases with 25 deaths were treated, resulting in a case fatality rate of 19.5 per cent. Seventeen of the cases were admitted to hospital with empyema, and of the remaining 111 cases 70 were secondary to lobar pneumonia and 16 to broncho-pneumonia. The other 25 cases followed pleurisy, otitis media, tuberculosis, cerebro-spinal fever, and various other infectious diseases. During this period 250 cases of lobar pneumonia and 82 of broncho-pneumonia were treated in the hospital, so that empyema complicated 28 per cent of the lobar pneumonias and 19.5 per cent of the broncho-pneumonias. Eleven, or 8.6 per cent, of the 128 patients at this hospital were invalided from the service. At the Great Lakes hospital only one patient among 85 has been invalided from the service.

There occurred in the force afloat 1,007 cases. The highest incidence for any one month was in March, 1918, 225 cases, and the lowest

in August, 28 cases.

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During the whole year, from 339 ships comprising vessels of all classes and including the Atlantic Fleet, as well as the other principal ships of the Navy, 791 cases of pneumonia were reported.

Eighty vessels reported no cases during the entire year; 31 reported 1 case each, and 42 reported 3 or less. For the remaining 186 ships

the greatest number of cases reported was 31 from the U. S. S. South Carolina. The highest incidence in any month for one ship was 15 cases, U. S. S. Michigan, in March. The highest incidence for any one week occurred in the same ship, 11 cases, in the second week in March, with 1 case the preceding week and 2 the following week. Seven cases occurred in the U. S. S. South Carolina during the second week of February, with 3 the preceding week and none the following week.

MEASLES.

With the induction of several hundred thousand young men and boys into service this disease became a formidable menace to the health of the Navy. But for the detention systems in operation at training stations and camps measles undoubtedly would have caused most serious interference with the training of new personnel and

with the movements of ships.

Seven hundred and seventy-one cases of measles occurred in the force affoat from July 1, 1917, to July, 1918. From 339 ships, including ships of the fleet and other vessels of all classes, 626 cases were reported. An analysis of these shows that 202 vessels reported no cases during the year; 53 reported 1 case each, and 22, 2 cases each. The largest number of cases occurring in any one ship during the year was 20 in the U. S. S. Leviathan, where the crew was exposed repeatedly to infection by troops. The greatest number of cases in any one week in one ship was 10, in the Leviathan during the first week in January, with 2 cases the preceding week and 1 the following week.

Measles is the most easily transmitted of all the communicable diseases of the respiratory type with the possible exception of influenza and it was not to be expected that damage from this disease could be avoided, since a considerable proportion of the new personnel came from small places and rural communities in the Middle West and South, and a relatively high percentage of such personnel had not been exposed previously to measles. For example, a canvass of three regiments at Great Lakes, comprising 4,841 men, showed 905 nonimmunes, 18.7 per cent. About 10 per cent of the latter acquired measles or German measles during their stay at the training station.

None of them gave a history of a previous attack.

The disease is being brought to training stations constantly. Of course, many cases are discovered in incoming detention, but measles is also being reintroduced by men returning from leave or liberty where they have been exposed at home, in street cars, and in places of public assembly. Consequently successful repression depends upon the proportion and distribution of immunes, the size of popula-

tion groups, and early detection of cases.

On the whole, training stations have been highly successful in the prevention and control of measles, but leaving the cold months of the year out of the argument it is a debatable question whether the ultimate damage to the service both in deaths and sick days would not be less if the nonimmunes contracted measles and had it over with once for all at the training station during the late spring. summer, and fall months. Contrary to general opinion many authorities believe that an attack of measles confers lasting immunity.

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Second attacks of genuine measles are very infrequent and negligible

from the standpoint of damage.

The reasons for the seasonal prevalence of measles are the same as those for the other respiratory diseases. The factors which play an important part in the development of pneumonia and cerebrospinal fever probably have little to do with predisposition to measles, but the factors concerned in disseminating the organisms or virus are fully operative—close housing, personal contact, coughing, and sneezing. Naturally the weather has much to do with these.

Measles is a serious disease and when large numbers of non-immunes are gathered together it is prone to become devastating in its effects, particularly under barrack conditions in cold weather when pneumococci, streptococci, and meningococci commonly constitute a part of the uniform bacterial flora of the upper respiratory tracts of men living together in large groups, but during the progress of an epidemic of measles the passage of the primary virus from person to person may result in such intensification of virulence that

the uncomplicated disease itself may become extremely fatal.

During seven weeks in July and August 183 cases and no deaths were reported from the entire Navy, whereas during January, February, and March a series of 1,880 cases treated in various naval hospitals gave a case fatality rate of 4.46 per cent, and in the two stations where outbreaks of the other communicable diseases occurred simultaneously the rate was much higher than this general average. Two hundred and thirty-six cases at Great Lakes resulted in 35 deaths (14.83 per cent), of which 25 were caused by bronchopneumonia, 6 by lobar pneumonia, and 1 by cerebrospinal fever, and 228 cases at Norfolk were followed by 27 deaths (11.84 per cent), 26 of which were due to broncho-pneumonia and lobar pneumonia and 1 to cerebrospinal fever. A high death rate is closely associated with the prevalence of pneumonia among the personnel exposed to measles. During the same winter months at various stations, both in the North and South, where pneumonia was not prevalent, 920 cases of measles gave a case fatality rate of 1 per cent, and it is to be noted that even in the latter series 8 of the 10 deaths were caused by complicating pneumonia while chronic pulmonary tuberculosis was a contributing cause in the other two.

The statistics given above indicate how important it is to protect the patient with measles from cold. During the acute stage of the disease the skin and mucous membranes are congested and peculiarly sensitive to temperature changes as well as to infection by pathogenic cocci. It is important that exposure to pneumonia patients be prevented. Patients developing secondary pneumonia should be removed promptly from the measles ward. Transfer of measles ratients to hospital in cold and windy weather should be avoided then practicable. Measles patients should be kept in bed for at

east seven days after the temperature has reached normal.

SCARLET FEVER.

The Navy, as a whole, has suffered very little from this disease ring the fiscal year. There have been several outbreaks at shore ations as well as in a few ships.

An interesting outbreak of scarlet fever occurred at the naval training station, Great Lakes, Ill. It ran its course in a few days and furnishes a striking example of what may be accomplished by an intelligent and prompt epidemiological investigation. Such a study was made and resulted in the detection of a messman who had not reported sick but who was found to have a mild attack of the disease and to be handling uncooked food in a mess hall. Isolation of the man and contacts resulted in promptly controlling the disease. One other outbreak occurred at Great Lakes during the winter months, covering a period of 11 weeks. The highest number of daily admissions was 35. It was complicated by the presence of German measles, which added confusion to the diagnosis. The disease was finally gotten under control by early detection and isolation of cases and the use of nasal intillations.

During the fiscal year there have been approximately 997 cases of scarlet fever reported from all ships and shore stations. Three hundred and forty occurred in the first half of the year with an annual admission rate of 2.44 per thousand. Six hundred and fifty-seven occurred in the last half of the year with an annual admission rate of 3.34 per thousand.

DIPHTHERIA.

The number of cases of diphtheria reported during the fiscal year was approximately 915, with 28 deaths, making an annual admission rate of 2.76 per thousand and a case fatality rate of only 3.06 per cent. This low figure plainly indicates early diagnosis of the disease and property use of antitoxing

prompt use of antitoxin.

Diphtheria is a carrier-borne disease and therefore foci of infection are readily transported from place to place. To prevent this constant vigilance on the part of medical officers is required so that carriers may be detected and isolated. Much preventive work has been done in this respect as well as in the application of the Schick test to detect nonimmunes and in the administration of toxinantitoxin to produce immunity. Such preventive measures have undoubtedly kept the incidence of the disease at a low level throughout the Navy as a whole.

However, in spite of preventive measures, a focus of infection which had persisted in the receiving ship at New York for several months, finally developed in March into a decided outbreak, and the disease then spread to other places, including the U. S. S. Pueblo the U. S. S. Michigan, and the U. S. S. Leviathan. All of these vessels had received drafts from the receiving ship, New York. In all instances prompt suppressive methods were instituted. Carrier were detected and isolated. The Schick test was applied and toxin antitoxin administered where necessary so that before the end of the year the incidence of the disease was reduced to a few sporadic cases.

MUMPS.

This disease, while associated with practically no mortality, here the cause of much annoyance, inconvenience, and loss of the to the Navy. It is highly communicable, attacking the great priority of available susceptible individuals. Its long period of in

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bation (at times over three weeks) makes it impossible catch all cases during the period of detention of the recruit. The youth-fulness of the average recruit, together with the fact that many are recruited from rural districts where communicable diseases in general are not as common as in cities, accounts to a great degree for the large amount of susceptible material at training stations.

For the fiscal year ended June 30, 1918, there were approximately 16,974 cases of mumps reported from all ships and stations, 5,986 of which developed during the first six months (July to December, inclusive), and 10,988 of which developed during the last six months (January to June, inclusive). This makes an annual rate per 1,000 for the first six months of about 44.44. For the second six months the rate is but very little higher, 56.10, an excellent showing considering the greatly increased size of the Navy and the fact that the latter period contains the months when all diseases spread by nose and mouth secretions have their highest incidence.

INFLUENZA, 1917-1918.

Several local outbreaks were reported during the year. In the month of April influenza visited the United States submarine base, San Pedro, Cal., and the naval training station, San Diego, Cal. At the former station there were 120 cases; at the latter 410 cases. The outbreak at San Diego was the most severe. Influenza bacilli were recovered and 12 cases of pneumonia of a virulent type developed. The infection was traced to a Japanese training squadron, in the vessels of which an epidemic of influenza was said to have occurred.

At the San Pedro station influenza bacilli were not identified, but the disease clinically was influenza complicated by streptococcus infection. But few cases had pneumonic complications. Both out-

breaks ran a rapid course.

An outbreak of influenza occurred on a naval vessel in May during passage from Gibraltar to an African port, in which 91 cases occurred in a crew of 192.

In April and May the disease was prevalent in the fleet following

a cold and rainy period.

In one vessel several weeks later there occurred an epidemic which began June 4 and continued for two weeks, during which time there were 138 cases of influenza, with serious pulmonary complications in 8 per cent of the cases as follows: Three cases of lobar pneumonia, 1 with broncho-pneumonia, 1 with empyema, and 2 with sero-fibrinous pleurisy. There were 2 deaths, 1 from lobar pneumonia and 1 from empyema.

An extensive outbreak occurred in June in a regiment of Marines

in Santiago de Cuba. The disease was mild.

INTESTINAL PARASITES.

In view of the prevalence of hookworm infection in certain sections of the country and the decreased efficiency consequent upon infection therefrom, it was directed that stools of all recruits coming from these sections be examined at the station or sent to the Naval Medical School.

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Of 7,078 stools examined at the school, 622, or 8.9 per cent, were positive.

A number of examinations have been made at naval laboratories

located in the various stations as well as in ships.

In view of the fact that men showing marked physical deficiency would not apply for enlistment or would be rejected upon application this percentage is considered to show a very widespread infection.

VENEREAL DISEASE.

As pointed out repeatedly in previous reports, students of social problems seeking statistics relative to the prevalence of venereal diseases have always turned to the military and naval services for reliable statistics, since only vague estimates were obtainable from other sources. With the light of publicity beating upon the men of the Army and Navy it was difficult, in the absence of definite statistics for the male civil population, to controvert the general impression that men of the service showed a higher admission rate for venereal

diseases than young adult males in civil life.

The figures now obtainable for men examined for induction into the Army under the provision of the selective-draft act indicate most convincingly to all, what medical officers of the Army and Navy have long recognized, that the percentage of men in either service infected with venereal disease is lower year after year than the percentage of males of corresponding ages in civil life. It has been noted in a previous report that the percentage of applicants examined for reenlistment in the Navy and Marine Corps in former years who were rejected for genito-urinary disease of venereal origin was very small, about 0.5 per cent, compared with more than 1.5 per cent of men rejected for this cause upon application for first enlistment. Presented in this way, although the ratio is more than 3 to 1 in favor of the trained service man, the figures are not so striking as those obtained by computations based on the report of the Provost Marshal General, on the first draft, whereby it appears that there were 445,000 syphilities and 2,225,000 men infected with gonorrhea among registered men who were not called in the first draft.

The medical department of the Navy began 15 years ago to apply prophylactic measures against venereal diseases, and since that time has steadily broadened its campaign into a well-rounded program for the prevention and control of these diseases. In addition to purely medical measures, an increasing amount of attention has been given to the moral and educational phases of the problem.

As individual opinions vary widely as to what steps may be properly undertaken to promote upright living and prevent the incidence of venereal disease, and as there may be some misconception in regard to the attitude of the Navy in this mater, it seems fitting to outline the position taken by the bureau. Medical officers, both afloat and ashore, are charged with the duty of warning all persons in the naval service, and particularly the newer, younger men, of the danger of acquiring venereal disease through illicit intercourse and of the serious consequences of such disease. In the instruction given on health and personal hygiene they are required to emphasize the sin

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of impurity and the necessity of pure living for the fullest enjoyment of health and happiness and for the best and most loyal service to the country. In addition to setting up this standard of conduct, medical officers are enjoined to enforce early and appropriate treatment for venereal disease whenever discovered, as the result of periodic inspections of the crew authorized by the commanding officer or otherwise. However, men returning from liberty to ship or station shall have the right to report exposure to infection and to request prophylactic treatment. Men who in spite of instruction and entreaty disregard the moral law and the laws of health, who do not even endeavor by prophylaxis to ward off the injurious effect of their misconduct and later develop disease, are to be reported to the commanding officer and regarded as harboring concealed diseases. Men with venereal disease are not to be recommended for liberty while in the contagious period, except for the most imperative personal or business necessities, the aim being to keep them out of civil communities and facilitate prompt and continuous treatment. Whenever the exact source of contagion can be ascertained, it is to be reported to such authorities as have the power to deal with the female carriers of disease in the civil population.

Provisions have been made whereby no man in the Navy may be allowed to remain ignorant or misinformed as to the nature and proper care of each of the venereal diseases and of the serious con-

sequences which may follow infection.

While medical prophylactic treatment is to be applied early and efficiently in all cases when exposure is admitted, the line is drawn sharply between such early treatment on board ship or within the naval station and the issue of preventatives for individual use.

This year marks the awakening of the moral conscience of the Nation to recognition of the appalling toll of misery, physical damage, suffering on the part of innocent persons, economic losses, and burdens upon the State necessitated by the care of the disabled, sick, insane, and feeble-minded, inflicted everywhere upon communities as a result of the widespread prevalence of these diseases and

the associated intolerable social conditions.

Aroused by demands imposed by military and naval authorities looking to the protection of the armed forces against infection, and through the activities of a number of pioneer workers in the field of social hygiene the interests and resources of the entire country have been mobilized during the past year, with the result that a nation-wide campaign is now being waged for the prevention and control of venereal diseases throughout the civil population and not only the disease but the underlying conditions as well are being attacked from all angles. Fortunately the problem has been recognized everywhere as essentially related to the public health, and all plans of attack are being based on the practical methods of preventive medicine, which do not fail to make the fullest use of educational measures, moral suasion, appeals to legislative bodies, and enforcement of existing laws, and provide facilities for preventive medical treatment, dispensaries for diagnosis and treatment of both males and females, together with the detention or quarantine of infected prostitutes and other carriers of disease. Already 39 of the States have passed appropriate laws making venereal diseases notifiable,

recognizing them as communicable diseases dangerous to the public health, and providing for their prevention and control under the

direction of State and local health officials.

Mention should be made of the efforts of the splendid women in the neighborhood of the naval training station at Great Lakes, in the suburbs of Boston, in Newport, New York, Philadelphia, and in other places too numerous to mention, who have arranged entertainments and taken the men of the Navy into their homes in the kindest and most practical way in a sincere attempt to provide social diversion flavored with the essence of real democratic home life.

Thinking men and women have joined the campaign in steadily increasing numbers, and the movement has culminated in the passage of an act by the Congress of the United States creating the Interdepartmental Social Hygiene Board and a Division of Venereal Diseases in the Bureau of the United States Public Health Service, together with appropriations amounting in all to \$4,100,000 for expenditure in the next two years. Of this amount \$1,000,000 is to be expended under the joint direction of the Secretary of War and the Secretary of the Navy to assist the various States in controlling

Two hundred thousand dollars is appropriated for maintaining the Division of Venereal Diseases in the Public Health Service, and \$100,000 to be used under the direction of the Interdepartmental Board for any purpose for which any of the appropriations made by

venereal diseases for the protection of the military and naval forces.

the act are available.

The duties of the Interdepartmental Social Hygiene Board are to recommend the rules and regulations for the expenditure of moneys allotted to the States under the direction of the Secretary of War and the Secretary of the Navy; to select the institutions for research and educational purposes; to recommend to the secretaries such general measures as will promote correlation and efficiency in carrying out the purposes of the act and to direct the expenditure of the sum of \$100,000 for general purposes. The board shall meet at least quarterly and shall elect annually one of its members as chairman. The bill contemplates the care of civilian persons whose detention, isolation, quarantine, or commitment to institutions may be found necessary for the protection of military and naval forces.

The Interdepartmental Social Hygiene Board has been organized with the following membership: The Secretary of War, the Secretary of the Navy, the Secretary of the Treasury, Lieutenant Colonel W. F. Snow, United States Army, representing the Surgeon General of the Army; Lieutenant Commander J. R. Phelps, Medical Corps, United States Navy, representing the Surgeon General of the Navy; and Assistant Surgeon General C. C. Pierce, United States Public Health Service, in charge of the Division of Venereal Diseases, representing the Surgeon General of the United States Public Health

Service.

The Navy section of the Social Hygiene Division of the commission is deserving of special mention for its constant and manifest desire to assist the bureau to the utmost in the various activities within its field of work. The director and the assistant director of the section have been energetic and zealous in putting into effect measures of an educational nature in cooperation with or at the suggestion of the bureau and in furnishing such material as has been

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desired by various medical officers of the Navy in their work at naval stations and on board ship. Specific reference to this work was

made on page 34.

In the past, from the preventive medicine standpoint, the Navy's program was admittedly incomplete since means were not available for applying effective measures for prevention and control directly to the female carriers of venereal diseases, but it is now possible to attack the problem openly in the civil community, which, of course, represents the source of all the damage inflicted upon the service by these preventable diseases, and it appears that the work which the medical department of the Navy has been carrying on for years is at last being augmented by a comprehensive scheme of attack which has been taken up with vigor and enthusiasm in nearly all of the States.

The United States Public Health Service is now in a position, with funds available and with the new Division of Venereal Diseases added to its organization, to correlate the activities of State health organizations and unofficial bodies in the different States by developing an educational and medical program which can be applied effectively in all parts of the country. This program will be developed in harmony with that of the Interdepartmental Social Hygiene Board, which will insure effectiveness and prevent reduplication of effort and at the same time secure the greatest possible assistance to the Army and Navy. The United States Public Health Service in connection with this work already has officers in 32 States. Thirty-nine States have adopted laws based wholly or in part upon the regulations drawn up by the Division of Venereal Diseases under which distribution of the respective allotments of the million dollars expendable this year will be made to the States. These States have recognized venereal diseases as communicable and dangerous to the public health and have made then notifiable by law. The remaining States, with possibly one or two exceptions, expect to do so in the immediate future. Thirty-two States have been induced to pass laws making it illegal for druggists to dispense nostrums and remedies for the treatment of venereal diseases.

Plans are under way to secure the cooperation of all State and county medical societies and to enlist the services of influential citi-

zens and societies everywhere.

Arrangements have been made to start clinics in 102 different cities under the joint auspices of the United States Public Health Service and the American Red Cross. Twenty-five such clinics are now in active operation in extra-cantonment zones. Five of them have been established in areas adjacent to the naval stations at Portsmouth, N. H., New London, Conn., Norfolk, Va., and Charleson, S. C., to assist in the enforcement of measures for the control of emercal diseases in the civilian population. The American Red ross has appropriated the sum of \$100,000 for this purpose. At the close of the fiscal year 89,460 treatments had been administered 24.848 individuals and 2,819 prostitutes infected with venereal diseases had been placed in detention for treatment, the Public Health rice supplying medical attendants and the Red Cross nurses dequipment. The Public Health Service and the Red Cross have the arsphenamine free to these clinics to the extent of 20,000 doses.

The admission rate for venereal diseases including syphilis, gonorrhea, and chancroid infections, for the entire Navy during the fiscal year ended June 30, 1918, was 105.77, against the average rate of 157.9 for the nine calendar years 1909 to 1917, inclusive. Undoubtedly a part of the decrease can be attributed to interdiction of alcoholic liquors for men in uniform and the declaration of zones around numerous naval stations, but it is also clear that renewed efforts in the service in conjunction with the elaborate program now being put into effect with ever increasing energy in civil communities are accomplishing uniformly good results for the Navy ashore and in home waters, and it may be said that weekly computations, on the whole, indicate that continued improvement in rates can be expected during the coming year. Because of the long course of this disease, the accuracy in diagnosis which is afforded by complement fixation tests and the greater fear in which it is logically held it is probable that a smaller percentage of the cases of syphilis have escaped detection than cases of gonorrhea both in the past and during the present year. There has been only a slight reduction in the admission rate for gonorrhea. While figures can not be produced to substantiate the conclusion it is very probable that a higher percentage of gonorrheal infections has been detected this year than in previous years in view of the fact that several transfers of men from one place to another during the successive stages of training have occurred during the year for the great majority of the present personnel and each transfer has included an examination for venereal disease; moreover, routine and surprise inspections have been made at shore stations. Formerly the instructions governing such inspections applied only to ships.

In general, reports for the force afloat have been surprisingly good. For example, recently a group of 41 ships of the fleet, representing an aggregate complement of 28,157 men, reported an average rate of

51.22 for a period of two successive weeks.

Such reports, of course, are merely side lights upon the situation. On the other hand, it should be said that difficulties encountered in the numerous ports abroad, including those in the Mediterranean over which the naval authorities have no control, are responsible for many infections among the crews of vessels carrying cargo or acting independently. Early medical treatment administered on board ship after many hours have elapsed since exposure is manifestly impotent to prevent the development of many infections.

The effect of such instances in making for a higher admission rate for the whole service is out of proportion to such effect before the war and it should be taken into consideration as indicating that statistics for the year would have registered an even more striking reduction in rates if social conditions in foreign ports were under

good control as they are already in the United States.

The following table includes admission rates for the previous m calendar years and those for the fiscal year ended June 30, 1918. must be borne in mind that the rate for chancroid is not accurate indicative of the incidence of this infection since a great many the patients finally admitted to the sick list with syphilis are admitted with the diagnosis chancroid. Rates for years previous admitted with the diagnosis chancroid. Rates for years previous admitted with the diagnosis chancroid. Rates for years previous is in ma 1909 have not been included because only since 1908 have instructed in the States, we have instructed the states of t

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tions to medical efficers required that every person infected with a venereal disease be admitted to the sick list. If the patient's condition is such that he need not be excused from duty the admission is "for record only," and he is forthwith discharged to duty.

	Complement.	Syphilis.	Gonorrhea.	Chancroid.	All venereal diseases.
1909. 1910. 1911. 1912. 1913. 1914. 1915. 1916. 1917. Fiscal year 1918.	57, 172	25. 81	102.51	63.39	191. 71
	58, 340	22. 54	103.90	63.32	189. 76
	61, 399	27. 11	92.15	57.07	176. 33
	61, 897	23. 00	87.29	59.26	169. 55
	65, 926	21. 94	80.69	40.46	143. 09
	67, 141	19. 83	84.94	58.05	162. 82
	68, 075	21. 35	87.91	42.30	151. 56
	69, 294	22. 25	82:70	43.12	148. 07
	245, 580	10. 05	54,73	18.60	88. 71
	318, 240	12. 28	69.39	24.10	105. 77

TYPHOID FEVER.

During the year 1917 there were reported 66 cases of typhoid fever with 1 death. The case fatality rate reached the extraordinarily low figure of 1.5 per cent. The annual admission rate was 0.26 per thousand and the death rate 0.004 per thousand. A comparison with the last 12 years is shown in the following table:

Year.	Number of cases.	Number of deaths.	Case fatality rate per 100.	Annual admission rate per 1,000.
1905. 1906. 1907. 1908. 1909. 1910. 1911. 1912. 1913. 1914. 1915. 1916. 1917.	172 230 249 176 189 193 222 57 22 13 18 17 66	11 14 17 10 17 10 15 2 4	6. 4 6. 0 6. 8 5. 6 8. 9 5. 1 6. 7 3. 5 18. 1	4.16 5.40 5.37 3.32 3.35 3.30 3.61 .92 .31 .19 .26 .23

Previous to the year 1912 typhoid fever had been more or less prevalent in the Navy. During the latter part of 1911 typhoid prophylaxis was introduced, followed by a drop in the admission rate from 3.61 per thousand in 1911 to 0.92 per thousand in 1912. Since 1912 the admission rate has averaged only 0.25 per thousand for the 5-year period from 1913 to 1917. This is in marked contrast to the admission rates for the 5-year period 1907 to 1911, before typhoid prophylaxis was introduced. This period gives an average admission rate of 3.79 per thousand.

The low admission rates for the last five years must be attributed largely to the typhoid prophylaxis which is administered to all men shortly after enlistment or reenlistment.

The Navy mortality for this disease, 0.004 per thousand in 1917 is in marked contrast to that in the registration area of the United States, which for 1916 was 0.133 per thousand.

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Poisoning by Trinitrotoluene.

There have been 10 cases of trinitrotoluene poisoning among civilians employed by the Ordnance Department of the Navy, Norfolk, Va., but the symptoms were mild and recovery was relatively prompt. No cases of poisoning were reported from Iona Island. Minute instructions have been given to this class of workers and printed directions have been put up in the shops regarding precautions to be taken. At the torpedo station, Newport, R. I., no serious consequences have been noted from the handling of trinitrotoluene. After work of this type had been going on for one year there were a few cases of superficial, local skin irritation.

Trachoma.

Year.	Average complement.	Admissions.
1912	61,897 65,926	3
1914	67,141 68,075	8 31
1916	69, 294 245, 580	12 37

Tuberculosis.

The state of the second st	Admitted.			
	Number.	Rate per 1,000.	Deaths.	Sick days.
1909. 1910. 1911. 1912. 1913. 1914. 1915. 1916.	311 349 319 264 325 295 253 287 796	5. 43 5. 98 5. 19 4. 26 4. 92 4. 39 3. 71 4. 14 3. 24	40 44 48 32 30 38 36 39 61	58, 984 65, 443 64, 668 57, 723 67, 423 80, 237 82, 233 78, 889 100, 277

Total admissions and readmissions to sick list-Deaths and sick days per 1,000.

	Per 1,000 of personnel.		
the contract of the policy of the contract of	Admissions and re- admissions, all causes.	Deaths.	Total sick days.
Average, years 1901–1910. 1912. 1913. 1914. 1915. 1916. 1917.	897. 35 787. 46 760. 03 886. 58 955. 91 998. 22 795. 32	5. 38 4. 08 3. 82 4. 18 4. 48 4. 83 4. 36	10, 871. 12 9, 449. 39 10, 041. 41 10, 862. 28 11, 402. 17 11, 674. 18 10, 421. 66

Menin Menin Pleuri Wound Fractur Exhaus Multiple Septicen Nephritis Burns...

The prince

Errors of refraction
Underweight
Defective teeth
Pat feet
Deformities
Heart affections
Underweight
Color perception defe
Gentio-unary (vene
Gentio-unary tendency t
Defective hearing.
Foor physique

Disabilities having the greatest number of sick days during 1917 as compared with the years 1913, 1914, 1915, and 1916.

	1913	1914	1915	1916	1917
Syphilis. Tuberculosis, chronic pulmonary Gonorrhea (urethral) Appendicitis Mumps Measles Tonsillitis Hernia, inguinal Chancroid Otitis media Bronchitis Malaria, Pleurisy. Pneumonia Influenza	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	2 1 3 5 6 12 4 8 9 10 7 11 13 14 15	2 1 3 6 5 15 4 9 12 11 8 10 13 14	2 1 3 9 8 13 5 6 11 10 12 4 15 14	5 11 12 5 11 14 15 7 13 12 9

Leading causes of death for the past five years in the Navy.

	1913	1914	1915	1916	1917
Pneumonia, all forms. Drowning. Cerebro-spinal fever. Tuberculosis, all forms Meningitis. Pleurisy, suppurative. Wounds, gunshot. Fracture of skull Exhaustion from overexposure Multiple injuries, extreme Septicemia. Nephritis, all forms Burns.	21 32 6 32 4 19 10 5 4 8 12	33 42 1 42 1 3 30 9	22 51 4 51 1 1 13 14 5 14 5 13 14	18 74 1 39 5 5 27 19	2000 193 112 611 522 477 388 300 299 14

RECRUITING.1

The principal causes of rejection of candidates for original enlistment are as follows:

	Navy.	Marine Corps.	Naval Reserve.
Errors of refraction Underweight. Defective teeth Flat feet. Deformities. Heart affections Underheight Color perception defective Genito-urinary (venereal) Hernis; or tendency to Defective hearing. Poor physique.	29, 945	4,845	5,859
	31, 531	2,731	4,204
	13, 884	2,361	2,506
	11, 072	3,374	2,041
	9, 540	1,681	797
	7, 608	2,856	1,999
	6, 712	1,069	605
	5, 733	1,202	952
	5, 647	1,101	539
	4, 855	1,354	1,165
	4, 267	839	384
	3, 352	846	254

¹ See also Table 7 under Statistics.

NECROLOGY.

It is with genuine sorrow that I have to record the loss to the service, by death, of the following officers of the medical corps:

Medical Director N. M. FEREBEE, U. S.	N., retNovember 25, 1917.
Surgeon R. B. WILLIAMS, U. S. N	December 3, 1917.
Surgeon H. A. DUNN, U. S. N	December 13, 1917.
Medical Director R. C. Persons, U. S.	N., retMarch 3, 1918.
Medical Inspector W. S. Hoen, U. S. N	VJuly 7, 1918.

The following-named officers, deceased, lost their lives through direct participation in the war:

Assistant Surgeon D. W. Queen, U. S. N., attached to U. S. S. Cassin, died of epidemic cerebro-spinal meningitis at	
Queenstown, IrelandNovember 19, 191	7.
Passed Assistant Surgeon L. C. Whiteside, U. S. N., senior	
medical officer of the U. S. S. President Lincoln, when	
this vessel was sunk by a torpedo May 31, 1918.	
Assistant Surgeon J. B. ASPER, U. S. N., attached to the	
U. S. S. Cyclops, which was lost at seaJune —, 1918.	
Dental Surgeon W. E. OSBORNE, U. S. N., killed in action	
while serving with the Sixth Regiment U. S. Marine	
Corns France June 6 1918	

The officers named below died of influenza or pneumonia while discharging their professional duties during the recent widespread epidemic of influenza:

Lieutenant (J. G.) G. T. COURTENAY, Med. Corps, U. S.
N. R. FSeptember 23, 1918.
Lieutenant J. L. Fisher, Med. Corps, U. S. NSeptember 24, 1918.
Lieutenant (J. G.) J. A. McCarthy, Med. Corps, U. S.
N. R. FSeptember 26, 1918.
Lieutenant G. M. Neuberger, Med. Corps, U. S. N. R. FSeptember 27, 1918.
Lieutenant B. E. Summers, Med. Corps, U. S. NSeptember 28, 1918.
Lieutenant (J. G.) M. J. CARROLL, Med. Corps, U. S. N. R. F. September 29, 1918.
Lieutenant (J. G.) J. L. G. King, Dental Corps, U. S. NSeptember —, 1918.

HONORS AND DISTINCTIONS.

On June 12, 1918, the degree of Doctor of Science was conferred upon the Surgeon General of the Navy by the Northwestern Uni-

In September, 1918, Commander H. F. Strine, Medical Corps, United States Navy, was elected Professor of the Principles and Practice of Surgery at Georgetown University, Washington, D. C., and Acting Chief of the Department of Surgery at the University Hospital.

The following officers were awarded the Distinguished Service Cross for their performance of duty in France:

Lieutenant Commander P. T. Dessez, Medical Corps, United States Navy. Lieutenant Commander W. G. Farwell, Medical Corps, United States Navy. Lieutenant Commander W. H. Michael, Medical Corps, United States Navy. Lieutenant Commander J. T. Boone, Medical Corps, United States Navy. Lieutenant Commander O. D. King, Medical Corps, United States Navy. Lieutenant R. O'B. Shea, Medical Corps, United States Navy. Dental Surgeon W. G. Osborne, United States Navy.

W. C. BRAISTED.

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I. J. K.

¹ The honor was awarded posthumously.

STATISTICS.

PREFACE.

The basis for all medical department statistics lies in the forms used in connection with the preparation and keeping of the "Health Record," which deals with the physical requirements and health of the personnel of the Navy and Marine Corps.

Table No. 1.—Detailed statement of diseases and injuries for the calendar

vear.

(a) This table gives an alphabetical list of disabilities, the Navy class and international numbers (from the Navy nomenclature), shows the method of taking up and disposing of all cases, the number of sick days or time lost to the service (from Form F cards), and a summary with comparative data for 10 previous years (from Form K).

(b) The class number (Roman numeral) refers to the classification of the

Navy nomenclature, as follows:

I. Diseases of blood.

II. Diseases of circulatory system.

III. Diseases of digestive system. IV. Diseases of ductless glands and spleen.

V. Diseases of ear.

VI. Diseases of eye and adnexa.

VII. Diseases of genito-urinary system (nonvenereal).

VIII. Diseases of infective type (nonvenereal). IX. Diseases of infective type (venereal).

X. Diseases of lymphatic system. XI. Diseases of mind. XII. Diseases of motor system. XIII. Diseases of nervous system.

XIV. Diseases of respiratory system. XV. Diseases of skin, hair, and nails.

XVI. Hernias, XVII. Miscellaneons diseases and conditions.

XVIII. Parasites (fungi and certain animal parasites).

XIX. Tumors.

XX. Injuries (wounds, etc.).

XXI. Poisons.

(c) The international number refers to the classification of diseases and injuries prepared by the International Commission (Paris, July 1 to 3, 1909).

(d) In the case of wounds, etc., and poisons, key letters immediately following the title (e. g., Abrasion, unqualified "G") are given for classification of the cause of such injury, and are interpreted as follows:

 A. Suicidal. B. Homicidal.

C. Conflagration. Includes all injuries incident to general conflagration. Burns otherwise received are not classed hereunder.

D. Accidental drowning or submersion.

- E. Traumatism by firearms, accidental. To include all injuries caused by the projectile, the blast from great guns, or from the piece when
- F. Traumatism by explosion. To include powder, gas, compressed air, or steam explosions; also the explosion of a gun.

G. Traumatism by fall.

- H. Traumatism by machines.
- I. Traumatism by other crushing.
- J. Traumatism due to athletic sports.

K. Casualty in action.L. Traumatism due to other external violence not classified above.

(e) Figures from previous years for the preparation of the summary are as follows:

Year.	Average complement.	Number of cases.1	Deaths.	Invalided from service.	Sick days.
1906 1907 1908 1908 1909 1910 1911 1912 1913 1914	42, 529 46, 336 52, 913 57, 172 58, 340 61, 399 61, 897 65, 926 67, 141 68, 075	43,714 40,875 46,380 51,341 50,782 52,953 50,565 50,106 59,526 65,074	241 263 305 286 363 282 282 282 252 281 305	1,117 1,324 1,878 1,704 1,556 1,559 1,345 1,319 1,426 1,272	518, 461 498, 230 543, 603 578, 302 613, 656 671, 389 645, 079 662, 090 729, 305 776, 203

¹ Number of cases includes remaining from last year, admitted, and readmitted.

Table No. 2.—Distribution of diseases and injuries among occupational groups

for the calendar year.

(a) This table shows by occupational groups the class of disability, average complement, number of admissions, deaths, suicides, invalided from service (with rates per 1,000), sick days, and a damage figure; also a total for all occupations giving admissions, deaths, invalided from service (with rates per 1,000 based on the entire service complement), sick days, and a damage figure.

(b) The average complement for each occupational group is obtained from the Navy Year Book, except in the case of prisoners, which is obtained from the office of the Judge Advocate General of the Navy, and grouped as follows:

Officers: Line, medical, dental, pay, chaplain, professor of mathemtics, naval constructor, civil engineer, chief and warrant, and Marine Corps.

Midshipmen: All classes of this personnel. Electricians: All classes of this rating. Engine room: Machinist's mate and oiler. Fireroom: Fireman and water tender.

All other artificers: Blacksmith, boiler maker, carpenter's mate, coppersmith, painter, plumber and fitter, printer, sailmaker's mate, ship fitter, and ship-

Clerical: Storekeeper and yeoman.

Culinary: Baker, commissary steward, cook, messman, ship's cook, and

Hospital Corps: All ratings of this corps.

Marines (enlisted): All enlisted ratings except Marine Band and drummer and trumpeter.

Musicians: Bandmaster, bugler, drummer, leader, musician, and trumpeter. Prisoners: Detentioners and general court-martial prisoners.

Apprentices: Apprentice seamen.

Ordnance: Gunner's mate and turret captain.

All other deck ratings: Boatswain's mate, coxswain, landsman, master-atarms, mate, quartermaster, seaman, and seaman-gunner.

(c) Number of admissions, deaths, suicides, invalided from service and sick

days obtained from Form F cards.

(d) Rate per 1,000 is based on the average complement at the heading for

each group.

(e) Damage is in terms of individuals whose loss of service by sickness, discharge from service, or death would be represented as continuous throughout the year. Damage, at the bottom of the table, is based on the average complement and figures under each group and for all occupations, at the right of the table, for the average complement and figures under "Totals for all occupations.'

Damage is estimated by adding the death rate to the invalided rate and dividing this sum by 20 (see Gatewood's Hygiene); to this product add the percentage of sick, then multiply this sum by the average complement divided

by 100.

Death rate and invalided rate is obtained by dividing the number of deaths

or invalided by the average complement divided by 1,000.

Percentage of sick is obtained by dividing the daily average of patients by the average complement and multiplying this product by 100.

Absc Inte Absce. VII, Absces 84). Absces. Inter. Abscess Abscess (Class Abscess Inter. 1 Abscess o (Class V Abscess of Abscess of 115)... Abscess of Inter. 98) Abscess of ly Abscess of ny Abscess of ny XIV, Inter Abscess of purification in the Abscess of purification

Abscess of pro VII, Inter.

Abscess of sali III, Inter. 99 Abscess of sero

Inter. 127)...

Daily average of patients is obtained by dividing the sick days by the number of year days.

Table No. 3.—Casualties in the Navy and Marine Corps for the calendar year. This table is a summary of deaths, showing the cause, number, and the distribution among the officers and men.

Table No. 4.—Discharged from the service by reason of physical disability during the calendar year. This table is a summary of those invalided from the service or retired on account of physical disabilities, showing the disability, number, and distribution among the officers and men.

Table No. 5.—Surgical operations for the calendar year. This table is a summary of surgical operations performed, showing the condition for which the operation was performed, result of the operation, and the anesthetic employed.

Table No. 6.—Dental operations for the calendar year. This table shows a summary of dental operations and treatment, together with the number for each kind.

Table No. 7.—Recruiting statistics for the Navy and Marine Corps for the calendar year. This table is a summary of persons applying, examined, and enlisted, showing the total number of applicants, total enlisted, number examined by the medical officer, number rejected by the medical officer for physical disqualifications, in the Navy for original and reenlistment, in the Marine Corps for original and reenlistment; also accepted applicants reexamined, and the number examined, etc., for all classes of the Naval Reserve and for civilian cruise.

A list of the principal causes of rejection by the medical officer is also appended.

Table 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917.

	Tak	en up	as—			Ι	Disposit	tion.			days
Diagnoses.	Remaining from last year.	Admitted.	Readmitted.	Duty.	Diagnosis changed.	Died.	Invalided from service.	Ran.	Transferred.	Continued to next year.	Number of sick dather, this year.
DISEASES.											
Abscess about rectum (Class III, Inter, 110B)	6	164	95	158	14	1	. 2	2 1	80	10	3,684
VII, Inter. 125)		.8	4	7	2	·			. 4		165
84) Abscess of brain (Class XIII.		83	32	78	1	ı			31	5	1,540
Inter. 60)		3	1				3 1				103
(Class VII, Inter. 127)		2		2							17
(Class VI, Inter. 75C)		6	1	7							28
bscess of kidney, perinephritic		3	3	2		1			2	1	142
(Class VII, Inter. 122)		3	5	2					5	1	192
Inter. 87) bscess of liver (Class III, Inter.		3		2						1	52
bscess of lung (Class XIV.	•••••	1		· · · · · ·		1					6
Inter. 98)bscess of lymph-node (Class X,	1	9	2	3	2	3			3	1	280
Inter. 84)bscess of nasal septum (Class	.1	61	36	59	3				32	4	1,696
XIV, Inter. 86)bscess of pharynx (Class III,		5	1	4					1	1	58
Inter. 100)		40	14	34					15	5	493
bscess of prostate gland (Class VII, Inter. 126).	1	3	2	5	1						145
bscess of salivary gland (Class III, Inter. 99B)	1	5	8	6	3	1			4	1	313
bscess of scrotum (Class VII, Inter. 127)		13	5	13					4	1	913

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Table 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917—Continued.

	Tak	ten up	as—		SECTION AND ADDRESS.	Di	ispositi	ion.	The state of	TO DO	days	
Diagnoses.	Remaining from last year.	Admitted.	Readmitted.	Duty.	Diagnosis changed.	Died.	Invalided from service,	Ran.	Transferred.	Continued to next year.	Number of sick this year.	
DISEASES—Continued.			*							wist.	drane,	
bscess of tongue (Class III,		15 0				P	I AB TES			- SALA		
Inter. 99B)		1	1	2							19	
bscess, subphrenic (Class III, Inter. 118)		1								1	25	
bscess, unqualified (Class VIII, Inter. 144)	29	2,613	526		63			1	452			
cne (Class XV, Inter. 145C)denoids (Class XIV, Inter. 86).denoma (Class XIX, Inter. 46).	1	24 33	18 23	27 30	2				15 21	4		
dhesions about gall bladder (Class III, Inter. 115)		6	5	5	1	•••••	•••••	•••••	4	1	102	
dhesions about stomach (Class)		5	4	1	•••••	•••••	4		4		183	
III, Inter. 117)dhesions of peritoneum (Class		3	1	2	1	•••••	1	•••••			152	
III, Inter. 117)	3	127	116	66	6		35		95	44	3,518	
dhesions, preputial (Class VII, Inter. 127)		10		10							5	
erogenes capsulatus infection (Class VIII, Inter. 20)		2	1	1		1			1		34	
120)		15	11	9	6		1		10		208	
lopecia areata (Class XV, Inter. 145C)		1		1							0	
maurosis (Class VI, Inter. 75C). mblyopia (Class VI, Inter. 75C).		7 31	8 21	5	2		4		3	į	228	
imputation stump (Class XVII,		100		11	1		18	•••••	17		766	
Inter. 149)mvotonia congenita (Class XII,	1	24	16	7	•••••	•••••	- 17	1	14	2	713	
Inter. 149) nemia of brain (Class XIII, In-		1	•••••		•••••	•••••	1	•••••	•••••		28	
ter. 74) nemia, pernicious (Class I, In-		2	1	2			•••••		1		5	
ter. 54) nemia, simple (Class I, Inter.		3	3	1			1		3	1	259	
54)	4	26	15	21	6		3		14	1	638	
nemia, splenic (Class I, Inter. 54)		1	2				1		2		120	
neurism, (Class II, Inter. 81) ngina ludovici (Class III, Inter.		9	7	.3	•••••	1	2	•••••	7	3	391	
100)ngina pectoris (Class II, Inter.	•••••	4	1	2	1			•••••	1	1	55	
80) ngioma (Class XIX, Inter. 46)		11	8	5 1	3	2	2		6	1	226 5	
ngiospastic edema (Class XIII,					•••••	•••••			1			
Inter. 74)	1	. 9	5	10	•••••	•••••	1	•••••	4		111	
Inter. 147)nkylosis of ossicles (Class V,	2	59	34	20	2	•••••	36	•••••	27	10	1,421	п
Inter. 76)nti-inoculation, unqualified		5	3	1			2		2	3	197	п
(Class XVII, Inter. 189A)	1	490 5	50 1	488	6		3		45	2	1,342	п
phasia (Class XIII, Inter. 74)		4	4	2	1				1 4	1	41	п
(Class XVII, Inter. 189A)ortitis (Class II, Inter. 81)phasia (Class III, Inter. 74)poplexy (Class XIII, Inter. 64)ppendicitis, acute (Class III, Inter. 184).		2	3	1	2		•••••	•••••	2	•••••	77	-
Inter. 108) ppendicitis, chronic (Class III, Inter. 108)	39	1,207		1,064	103	8	2	4	761	14 10 30 10	28,397	1
Inter. 108)	27	415	349	410	29		5		290	57	12, 134	10
XIII, Inter.81)			3				1		2		41	000
II. Inter, 81)		20	21	12		1	8		17	3	1,146	
rthritis, acute (Class XII, Inter.	2	304	177	250	48	3	2		143	37	6,500	Ce
rthritis, chronic (Class XII, Inter. 147)	12	111	100	60	18		46		81	18	4,177	Cha Cha
rthritis, deformans (Class XII, Inter- 48-		4	100	2		o de	2	THE	2	.079	304	Char

Table 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917—Continued.

	Tak	en up	as—			D	isposit	ion.			days
Diagnoses,	Remaining from last year.	Admitted.	Readmitted.	Duty.	Diagnosis changed.	Died.	Invalided from service.	Ran.	Transferred.	Continued to next year.	Number of sick this year.
DISEASES—Continued.											
Ascariasis (Class XVIII, Inter. 107) Asthma (Class XIV, Inter. 96)	1 2	51 100	10 126				42		6 90	13	426 3, 516
Astigmatism (Class VI, Inter. 75C). Athetosis (Class XIII, Inter. 74) Atony of bladder (Class VII, In-	5	172 1	72 2	138	6		39	1	56 2		
Atrophy of bone or cartilage		5	5	3			1		5	1	111
(Class XII, Inter. 146)	•••••	3	1	•••••	•••••		3		1	•••••	80
Atrophy of muscle (Class XII, Inter. 149)		24	7	3	2		13		7	6	433
Atrophy of optic nerve (Class VI, Inter. 75C)		6	3	1	1		3		3		25
Inter. 127) Autointoxication, intestinal		5	4	3			2		4		99
(Class III, Inter, 110B) Balanoposthitis (Class VII, Inter, 127)	. 5		64	573			1		53		2,350
Blastomycosis (Class XVIII, Inter. 25B)		56 1	20	51	6		•••••		15	4	796 22
Blepharitis (Class VI, Inter 75C). Bradycardia (Class II, Inter .85). Bromidrosis (Class XV, Inter.	1	13 3	4 1	9	2				1	3	117 30
145C) Bronchiectasis (Class XIV, Inter. 90)		2	1	2					1	•••••	11
Bronchitis, acute (Class XIV, Inter. 89)	1 45	5 4,764	1,093	3 4,503			1	1	913	100	491
Bronchitis, chronic (Class XIV, Inter. 90)	15	411	328	287	87		62		272	46	
Bronchitis, fibrinous (Class XIV, Inter. 90)		4		2					2		11
Bursitis, acute (Class XII, Inter. 149) Bursitis, chronic (Class XII,	1	124	35	115	7				31	7	1,318
Inter. 149) Caisson disease (Class XIII, In-	2	51	41	43	5	•••••	7		35	4	1,625
ter. 74) Calculus in bladder (Class VII,	•••••	4	1	3			•••••	•••••	1	1	59
Inter. 123)		5	3 5	4	2			•••••	3 2	1	. 200
Coloulus in urothro imported		2		1					. 1		56
(Class VII, Inter. 123)		17 112	17 34	19 109	3		2 1		11 29	2 4	370 1,393
Cardiospasm (Class III, Inter.	1	8	5	1	1	8	•••••	•••••	3	1	327
Caries of tooth (Class III, Inter. 99A).		1	2		1	•••••	•••••	•••••	2		8
Carrier, diphtheria bacillus, (Class VIII, Inter. 9b)	1	96 89	38 37	93 62	1	•••••	11	•••••	29 38	2 25	910 967
Cataract (Class VI, Inter. 75C) Cellulitis (Class VIII, Inter. 144) Cerebro-spinal fever (Class VIII.	13	15 1,212	380	1, 171	2 42		10		16 323	69	1,417 17,586
Inter. 61a) Cerumen, accumulation of (Class	• • • • • •	373	330	111	30	112	65	2	317	, 66	26,019
V, Inter. 76). Chalazion (Class VI, Inter. 75). Chancroid (Class IX, Inter. 38A). Chancroid of lymph-node (Class	19	$\frac{5}{22}$ 4,568	$\frac{1}{11}$ 745	5 21 4, 626	1 1 177			······ ₂	9 418	² 109	17 185 19,670
IX, Inter. 38A)	25	412	584	680	67		1	2	218	53	15,089

Table 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917—Continued.

g January January	Take	n up a	s		is need	Di	spositi	on.			days
Diagnoses.	Remaining from last year.	Admitted.	Readmitted.	Duty.	Diagnosis changed.	Died.	Invalided from service.	Ran.	Transferred.	Continued to next year.	Number of sick this year.
DISEASES—Continued.							.10	prices	-88	and the	
Chicken pox (Class VIII, Inter.	6	169	119	138	12		nosa!	HPA	117	27	2,927 170
Chilblain (Class XV, Inter. 145C). Cholangitis, acute (Class III,		13	3	7	1			177	5	3	
Inter 115)	5	241	85	226		5	1		81	18	3, 504
	1	3	2	4					2		133
Cholecystitis, acute (Class III, Inter. 115)	2	78	36	74		8	2	1	29	2	1,718
Cholecystitis, chronic (Class III, Inter. 115) Cholelithiasis (Class III, Inter.	1	15	(9		4	1		10	1	274
114)	. 6	38	28	8 29		5	102	4	31	3	1,472
Chondritis (Class XII, Inter. 149) Chondroma (Class XIX, Inter.		1					112	0) 57	3	1	49
.46) Chorea (Class XIII, Inter. 72)	1	25				2	. 1	8	22		652
Chorea chronic progressive		2		1		1	· mi	1	1	10	13 776
(Class XIII, Inter. 74) Choroiditis (Class VI, Inter. 75C) Chyle cyst of mesentery (Class	. 1	16				1		9	A salar	3 130	15
Chyle cyst of mesentery (Class III, Inter. 84). Chyluria, nonfilarial (Class VII,				1		1	100		000	00000	53
Inter. 121)				2 2					and;		
XVII, Inter. 1450)		15	1	3 4			188	9		212783	LI LE LES
145C)		2	1 2	2 13	3			5	18	Total of	719
Cirrhosis of liver, atrophic (Class III, inter. 113)			1	1			-	1		. 1	170
(Class III, Inter. 113)		2	5	4 2		2				4	63 380
Cirrhosis of liver, atropnic (Class III, inter. 113)						3			. 1	100	592
Colitis, chronic (Class III, Inter		. 8		3 7		2		1		8 2	
Color blindness (Class VI, Inter			8		5		•		1.5	3 1	rate.
75(1)		. 1		4	-	3		9	1	Total Control	60
Concretion in salivary gland (Class III, Inter. 99B) Congestion of kidney (Class VII		-	3	3	4					2	108
Inter. 122). Congestion of lung, acute (Clas		-	3	3	4				hhad	2	18
XIV, Inter. 94). Conjunctivitis, acute (Class VI		1	2	1	3			100	•	1	
Inter. 75A)		5 59	1	88 55	6	34			- 16		
Conjunctivitis, chronic (Clas VI, Inter. 75A) Conjunctivitis, phlyetenula		- 3	32	40 2	8	7		6	. 2		3 1,232
(Class VI. Inter. 75A)		1	9	5	6	2		1	• 200	5	1 101
Constipation (Class III, Intel		4 5	59	99 53	39	12		5		01 1	5 3,494
Constitutional inferiority (Clas XI, Inter. 68)		3 4	20 2	48 . 4	10	40		327	3 2	13 4	8 9,05
constitutional psychopathi state (Class XI, Inter. 68)		2	96	76	9	13		71		58 1	3,131
Inter, 147)			5	3	2	2			- 17	4	- 101
Contracture of muscle, fascia tendon, or sheath (Class XI	1, [,	-	1 1.5		1 54			10		10	4 64
Inter. 149)		3	25	16	3			16		3	4 64 70
Cramp of ciliary muscle (Class XI)	SS	18	8	5	7	1				5	- 86
Clamp of muscie (Class 221	ſ,	1	24		24	2				3	98
Curvature of spine (Class XI			-1				The state of	St. French	PER		4 677

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ANNUAL REPORT SURGEON GENERAL, U. S. NAVY.

Table 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917—Continued.

	Tal	ken up	as			Ι	Disposit	ion.			days
Diagnoses.	Remaining from last year.	Admitted.	Readmitted.	Duty.	Diagnosis changed.	Died.	Invalided from service.	Ran.	Transferred.	Continued to next year.	Number of sick d
DISEASES—Continued.											
Cyclitis (Class VI, Inter. 75C) Cysticercus, unqualified (Class XVIII, Inter. 107) Cystitis, acute (nonvenereal) (Class VII, Inter. 124)	1 2	5 1 81	44	1					40		177 4 1,500
Cystitis, chronic (nonvenereal) (Class VII, Inter. 124) Cyst of kidney (Class VII, Inter.		29	35	21	8	3	5		26		647
Cystoma (Class XIX, Inter. 46) Dacryocystitis (Class VI, Inter.	<u>4</u>	₇₃	1 38	70	4				36	1	31
75C) Deafness (Class V, Inter. 76) Deformity of external ear, acquired (Class V, Inter. 76)	6	12 61	6 43				37		. 35		213 1,837
Delorinity of nose occurred		1							. 1		12
(Class XIV, Inter. 86). Deformity of penjs, acquired (Class VII, Inter. 127).	3	22	21	20					. 23		453
Deformity of stomach, acquired (Class III, Inter. 103)		3	2	1			1	• • • • •	2		31
XI. Inter. 68)	1	16	32	1						1	23
Inter. 67)	11	16	49	7			3	•••••	28	7	1,430
Dementia, precox (Class XI, Inter. 68) Dengue (Class VIII, Inter. 19) Dentition (Class XVII, Inter.	15 5	164 872	355 195	21 855	30	2		1	38 312 177	13 60 25	4,037 10,763 6,018
189A)		13	6	8			5		5	1	59
Dermatitis, unqualified (Class XV, Inter. 145C). Dermatitis, venenata (Class XV,	1	133	42	130	6		2		33	5	1,474
Inter. 145C) Detachment of retina (Class VI,		102	19	104	1				16		676
Inter. 75C) Deviation of nasal septum (Class		4	6	2			2		5	1	212
XIV, Inter. 86). Diabetes insipidus (Class XVII,	16	305	237	285	36		4		213	20	6,478
Inter. 55). Diabetes mellitus (Class XVII,		3	4	1			2		4		87
Diagnosis undetermined (Class	2	43	44	16	10	4	13		41	5	1,588
XVII, Inter. 189A). Dilatation, acute cardiac (Class II, Inter. 79C)	. 1	1				•••••		1	1		7
II Inter 70C)	2	12	3	3	2	8	1	•••••	3		79
(Class III, Inter 103)		4	3		2		2	•••••	3		89
		1	1	3		1					15
(Class III, Inter. 103). Diphtheria (Class VIII, Inter. 9). Diverticulitis (Class III, Inter. 110B)	3	209	118	157	26	3			106	38	4,806
110B) Duodenitis (Class III, Inter. 105B)		20	11	17	3				2	1	39
Dysentery, bacillary (Class VIII, Inter. 14A)		18	5	16	1				6		380 208
Dysentery, entamebic (Class XVIII, Inter. 14C). Dysentery, unclassified (Class	5	67	59	68	5	1	1		48	8	2,260
VIII, Inter, 14D)	3	118	49	114	11		1	1	40	3	1,693
Dysidrosis (Class XV, Inter. 145C) Dystrophy, progressive, muscu- lar (Class XIII, Inter. 63)		2	1	1					1	1	34
Sethyma (Class VV, Inter. 75C) Ectropion (Class VV, Inter. 75C)	1.	i	····i						i	1	365 58

Table 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917—Continued.

notitions	Tak	en up	as—			Di	spositi	on.			days
Diagnoses.	Remaining from last year.	Admitted.	Readmitted.	Duty.	Diagnosis changed.	Died.	Invalided from service.	Ran.	Transferred.	Continued to next year.	Number of sick this year.
DISEASES—Continued.								hitta	0-43	EAGE	
Edema of lung (Class XIV, Inter.							108	in in			10
Elongation of uvula (Class III,		2	•••••			2					18
Inter. 100) Embolism (Class II, Inter. 82)		1 2	2	2		2			1		1
Emphysema, pulmonary (Class XIV, Inter. 97).	1			1							71
Endocarditis, acute (Class II,	2	48	39	15	15	5	8		34	12	1,59
Endocarditis, chronic (Class II, Inter. 79B).	1	66	61	27	4		• 49		43	5	1,548
Endothelioma (Class XIX, Inter.		1	1	1					1		99
Enlargement of prostate (Class)		1	1	2							11
VII, Inter. 126). Enteritis, acute (Class III, Inter. 105B).	4	1,319	165	1,336	29	2		1	117	3	5, 40
Enteritis, chronic (Class III, Inter. 105B). Enterocolitis (Class III, Inter.	1	9	17	9	3	1	2		12		481
Enterocolitis (Class III, Inter. 105B)		34	10	37	1			100	6		274
Entropion (Class VI, Inter. 75C).		1	1	i					ĭ		31
Epididymitis, acute (nonvenereal), (Class VII, Inter. 127)	4	175	67	160	25				55	6	1,956
Epididymitis, chronic (nonvenereal), (Class VII, Inter. 127) Epiglottiditis (Class XIV, Inter.		11	13	9	2		1		10	2	218
87)		1	320	777	30	i	266	·····i	1 275	40	12,08
Epilepsy (Class XIII, Inter. 69) Epilepsy, Jacksonian (Class	11	359		77	2	else.	6	Total Park	9	40	288
XIII, Inter. 74) Epiphora (Class VI, Inter. 75C)		6 1	11	1	2				1		17
Epiphora (Class VI, Inter. 75C). Epistaxis (Class XIV, Inter. 85). Epithelioma (Class XIX, Inter.		6	4	7	111	•••••	•••••		3		
39-45). Erysipelas (Class VIII, Inter. 18). Erysipeloid (Class XVIII, Inter.	·····i	122	6 75	93	10	i			72	22	2, 504
25B). Erythema multiforme (Class XV,		2		2							8
Inter. 145C)	1	14	5	14	1				4	1	162
Erythema nodosum (Class XV, Inter. 145C).		6	6	6	1				5		130
Erythema scarlatiniforme (Class XV, Inter. 145C).		14	7	13					7	. 1	246
Inter. 145C)		28	2	27					2	1	178
Erythrasma (Class XVIII, Inter. 25B)		1	1	1					1		41
Erythromelalgia (Class XVII, Inter. 142).		1		1							20
Esophagitis (Class III, Inter. 101).		1		1							35
(Class V, Inter. 76)		4	1	4					1		22
(Class V, Inter. 76) Exophthalmic goiter (Class IV,		5	3	5					3		122
Inter. 51)	1	18	23	7	5		13		17		958
Inter. 103)		19	2	18					3		68
Fermentation, intestinal (Class III, Inter. 105B)		50	7	49					7	1	233
Fever of unknown cause (Class	5		96	248	43				92	5	2,148
VIII, Inter. 189A)		21	6	18	1000		. 1		5		342
Fissure of anus (Class III, Inter.	. 2	5	5	12							162

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TABLE 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917—Continued.

				1							l m
	Ta	ken up	as-			Ι	isposi	tion.			days
Diagnoses.	Remaining from last year.	Admitted.	Readmitted.	Duty.	Diagnosis changed.	Died.	Invalided from service.	Ran.	Transferred.	Continued to next year.	Number of sick this year.
DISEASES—Continued.								* 1		1	
Fissure of skin (Class XV, Inter. 1450). Fistula, fecal (Class III, Inter. 110A). Fistula in ano (Class III, Inter. 110A).		3	8	3 3	3				. 3	. 2	177
110A) Fistula of larynx (Class XIV,	4	89	1 4		. '		2		69		1
Inter. 87) Fistula of trachea (Class XIV, Inter. 98)		1]]					1		21
Inter. 98) Fistula of urethra (Class VII, Inter. 125) Flagellate diarrhea (Class XVIII, Inter. 105 R)	2				1		,		3		19 213
III. 100D)		2	1	1					2		75
Folliculitis decalvans (Class XV, Inter. 145C)			3	2					1		35
Foreign body in auditory canal (Class V, Inter. 76). Foreign body in bronchus (Class		2		1	. 1						30
XIV. Inter 186)		1	1	1		1					15
Foreign body in frontal sinus (Class XIV, Inter. 146) Foreign body in pharynx (Class		1	1	1		:			1		3
Foreign body in stomach (Class		1		1							
III, Inter. 103) Foreign body in trachea (Class XIV, Inter. 186)		2		1					1		.7
Foreign body in urethra (Class		1				1					
Foreign body in urethra (Class VII, Inter. 125) Functional derangement of liver (Class III, Inter. 115)	2	1 23	10	1							20
143)	10	828	181		1				126	2	320
Ganglion (Class XII, Inter. 149). Gangrene (Class XVII, Inter. 142) Gastritis, acute catarrhal (Class III, Inter. 103).		12 2	6	12					6	26 i	7,358 138 116
Gastritis, enronic catarrnal (Class	5	437	124						91	20	3,622
Gastritis, acute phlegmonous (Class III, Inter. 103)	14	140	145				10		108	9	4,430
Gastroduodenitis (Class III, Inter. 105B)		9		8						1	24
Gastroenteritis (Class III, Inter. 105B)	5	47 890	181	904			1		16	1	529
Gastroptosis (Class III, Inter. 103)	J	7	6	304			Α		143	7	4,687
Genu valgum (Class XII, Inter. 147)		1					1		9	1	177
Genu varum (Class XII, Inter.		2	2	1			1		2		39
German measles (Class VIII, Inter. 19). Gigantism (Class XVII, Inter. 55)		4,066	2,503	3,689	205			3		16	
Gingivitis (Class 111, Inter. 99A).		17	3	15	·····i		i		1	2	136
Inter. 75C)		3	2	1	1		1		2		21
99B) Glycosuria (Class XVII, Inter.		5	5	6					4		70
Goiter (Class IV, Inter. 88)	····· 4	7 61	49	6 28	4		40		5 38	4	55 1,864
Gonococcus infection of conjunctiva (Class IX, Inter. 38B)	1	37	32	35	5				28	2	826
Gonococcus infection or joints (Class IX, Inter. 38B)	19	125	246	152	24		40	1	148	25	9,374
node (Class IX, Inter. 38B)	5	76	90	115	8		2	1	34	11	17,888

TABLE 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917—Continued.

	Tak	en up	as—			Di	spositi	on.			days
Diagnoses.	Remaining from last year.	Admitted.	Readmitted.	Duty.	Diagnosis changed.	Died.	Invalided from service.	Ran.	Transferred.	Continued to next year.	Number of sick this year.
DISEASES—Continued.							1,0	onibi	0-87	RAR I	rit /
Gonococcus infection of urethra (Class IX, Inter. 38B)	66	13, 442 657		14, 402 1, 070	238	1	17 10	14	1,752 393	346 102	78,756 22,306
Gout, acute (Class XVII, Inter. 48C)	1	. 4	2	6						1	81
48C) Hallux valgus (Class XII, Inter.			1						1		
Hallux varus (Class XII, Inter. 149)	1	18	13	10	3		5	•••••	11	1	619 54
Hammer toe (Class XII, Inter. 149) Hay fever (Class XIV, Inter. 98)	1 3	48 5	34 2	37 6		······	10		29	9	1,483
189A)	1	36	5	34	1				4	3	301
Heart block (Class II, Inter. 85). Hematemesis (Class III, Inter. 103)		3 2	1	2					1		35 6
Hematocele of spermatic cord (Class VII, Inter. 127) Hematoma of external ear, non-		1	1		1				1		5
traumatic (Class V, Inter. 76) Hematrrhachis (Class XIII, Inter. 63).	1	2	1	1			· Estato		2	1	131
Hematuria, renal (Class VII, Inter. 122)		18	21	. 16	3		- 2		16	2	608
Hemianopsia (Class VI, Inter. 75C)		2	1	1					1	1	114
Inter, 66)	1	3	5	2	1		2		4		184
Inter. 122)	•••••	2 2	3	1				•••••	1		11
VIII, Inter. 19). Hemophilia (Class I, Inter. 55) Hemoptysis (Class XIV, Inter. 98) Hemorrhage, intestinal (Class III, Inter. 110B)	1	5 10	6 9	5	1 7		2		5 8	1	324 226
(Class XIII, Inter, 64)	1	9	5	. 4		2	1		5	3	609
Hemorrhage into retina (Class VI, Inter. 75C). Hemorrhage, subdural (Class XIII, Inter. 64).		3	5	1	1		1		4	1	112
Hemorrhage under conjunctiva, nontraumatic (Class VI, Inter.	•••••	1				1				niena Liena	
Hemorrhoids (Class III, Inter. 83) Hemothorax (Class XIV, Inter.	15	679	501	641	51		7	2	452	42	12, 35
93) Hernia, epigastric (Class XVI, Inter. 109)		2		1					1		38
Hernia, femoral (Class XVI, Inter, 109)	•••••	9	9	8	4		2 2		13	2	351
Hernia, inguinal (Class XVI, Inter. 109)	39	1,166			89		183	2	clare	139	
Hernia of brain (Class XIII, Inter. 74). Hernia of muscle, fascia, tendon, or sheath (Class XII, Inter. 149)		1					1				2:
or sheath (Class XII, Inter. 149) Hernia, umbilical (Class XVI, Inter. 109)	1	9	4	5	 		2 2		7	2	118
Hernia, ventral (Class XVI,	0	41	31	24	2		14	1	26	8	1,270
Herpes (Class XV, Inter. 145C) Hiceough (Class XIII, Inter. 74).		51 2	14	51 2					10	4	400

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Table 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917—Continued.

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	Тε	aken u	p as—				Dispos	ition.			days
Diagnoses.	Remaining from last year.	Admitted.	Readmitted.	Duty.	Diagnosis changed,	Died.	Invalided from	Ran.	Transferred.	Continued to next	f sick year.
DISEASES-Continued.											
Hodgkin's disease (Class X, Inter. 53A). Hordeolumi (Class VI, Inter. 75C). Hydrocele of spermatic cord (Class VII, Inter. 127). Hydrocele of tunica vaginalis (Class VII, Inter. 127). Hydronephrosis (Class VII,		. 4 . 2 4 7	1 1	0 1	1 8 7	6		2	1	8	1 117 453 3 378 2 1,852
Inter, 122)	5	2 3	3	4	3	1	1	1		3	159
Hyperesthesia of retina (Class VI, Inter. 75C).		. 8	3 :	3	4	1] .	1			1 178
Hyperchylia, gastric (Class III, Inter. 103)		. 10	8		9			1			
Hyperidrosis (Class XV, Inter.		. 2			2					4	
Hypermetropia (Class VI, Inter. 75C).	1					5	1	4			18
Hypernephroma (Class XIX, Inter. 45E)		. 3					1	*	- 3		1,216
Hypertrophy of bone (Class XII, Inter. 146)		18		10							45
Hypertrophy of heart (Class II,		8							1 1		248
(Class XVII Inter 122)		4			1	4	'			6	173
Hypertrophy of tonsil (Class III, Inter. 100)	12								- 3		64
Hypochlorhydria (Class III, Inter, 103)	12	1				1		2	259	28	8,706
Hypochondriasis (Class XIII,		3		5			- 1		. 1	٠٠٠٠٠	226
Hysteria (Class XIII, Inter. 73A). Imbecility (Class XI, Inter. 74). Impacted feces (Class III, Inter. 110B).	i	12 115 62			13		- 36 - 50		66	16	255 2,718 1,230
Impetigo contagiosa (Class XV.		8		8							32
Inter. 145C)	, 1	88	37	83	2				36	5	1,192
XV, Inter. 145C). Impetigo simplex (Class XV,		5		4			.,		1		16
Inter. 145C)		8		8							72
Inter. 124) Infarct of lung (Class XIV, Inter. 94)		100	68	32	14		. 58		58	6	2,806
Inflammation of colivery gland	•	1		• • • • • •		1	•••••				5
(Class III, Inter. 99B). Influenza (Class VIII, Inter. 10). Ingrowing nail (Class XV, Inter. 145C).	55 10	10, 325	1,575	9,982	299	·····i		3		315	105 52,705
Insufficiency of ocular muscle	10	390	70	378	8		1		68	15	4,695
Insufficiency of ocular muscle (Class VI, Inter. 75C). Intertrigo (Class XV, Inter. 145C) Iridochoroiditis (Class VI, Inter. 75C).		25 3 2	17 1	10 3			14		14	4	724 26
Iridocyclitis (Class VI, Inter. 75C) Iritis (Class VI, Inter. 75C) Jaundice acute infective (Weille	1	9 82	65 65	69	11		2 3	í	6 53	1 11	31 317 2,968
disease) (Class VIII, Inter. 111). Kala-azar (Class VIII, Inter. 54). Keratitis (Class VI, Inter. 75C). Keratitis, phlyctenular (Class VI, Inter. 75C).	1	5 1 33	21	6 1 25	¹		3		19	1	273 93 875
Keratodermia (Class XV, Inter.	• • • • • •	5	9	8	1				5		236
145C). Keratoritis (Class VI, Inter. 75C) Keratosis (Class XV, Inter. 145C). Laryngitis, acute (Class XIV, Inter. 87).	i	3 2 2	3	1 3 1	1				3 2 1		189 20
Inter. 87)	2	442	82	400	13		1		71	41	3,425

TABLE 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917-Continued.

										-		
nathaio	Tak	en up s	as-	- 3	qui no	Dis	ispositi	on.			days	
Diagnoses.	Remaining from last year.	Admitted.	Readmitted.	Duty.	Diagnosis changed.	Died.	Invalided from service.	Ran.	Transferred.	Continued to next year.	Number of sick this year.	
DISEASES—Continued.								10000	9.3			
Laryngitis, chronic (Class XIV, Inter, 87). Leprost (Class VIII, Inter, 17). Leukemia (Class I, Inter, 53C). Leukoma (Class VI, Inter, 75C). Lichen, planus (Class XV, Inter, 145C).	1	1 2 2	1 3 1	1 1		i	3		14 1 3 1	1 1	974 48 103 22 138	
Lichen, ruber (Class XV, Inter. 145C) Lipoma (Class XIX, Inter. 46) Locameter stayin (Class XIII)	3	1 27	14	1 23	3		····i	1	14	2	20 311	
Locomotor ataxia (Class XIII, Inter. 62) Loose body in joint (Class XII,	2	9	6	4	3		2		5	3	427	
Inter. 147)	3		26.				7		10		814	
tilage (Class XII, Inter. 146) Lupus, erythematosus (Class XV, Inter. 145C)		5	365	1	100.5	1	1		6		388	
Lymphadenitis, acute (Class X, Inter. 84)	39						1		278		16,940	
Lymphadenitis, chronic (Class X, Inter. 84)	3	12	afor-	las i	The same			1		1746	1,814	
Lymphangiectasis (Class X, Inter. 84) Lymphangioma (Class XIX, In-		2		2							15	
ter. 46) Lymphangitis (Class X, Inter.		1	988	1	100						2	
Lymphoma (Class XIX, Inter.	2	100	39	94	8				37	2	1, 213	
Malaria (Class VIII, Inter. 4) Malformations, congenital (Class	62				125		1215	2			Paristo de la constante de la	
XVII, Inter. 150)	1						11		20	1	753	
189B). Malnutrition (Class XVII, Inter. 189A).		19					, yy	i and	2	12200 7	215 28	
Mastoiditis, acute (Class V, Inter. 146)	1					1	2		51	100	a least too	
Mastoiditis, chronic (Class V, Inter. 146).		24					8	BRIEF			987	1
Masturbation (Class VII, Inter. 74)	39	6 7,694	7,302	6,803	687	5	3	9	3 7, 141	390	90 121, 997	
Mediastino-pericarditis (Class II, Inter. 77)		1		1	1						10	Ne 7
Melancholia, involutional (Class XI, Inter. 68) Menière's disease (Class XIII,		4	4	1	1		2		· 4		100	Neu In Neur
Inter. 76)	. 1						2		5		111	Neuro
Inter. 61)	. 1					12	I mi		4		63	Neuro
XIII, Inter. 61)		135							95		6, 257	Neurosi Inte
Inter. 61). Metatarsalgia (Class XII, Inter. 149).		9	6	2		1	5		6	2	156	Nevus (
Migraine (Class XVII, Inter. 74). Millaria (Class XV, Inter. 145C). Mixed benign tumor (Class XIX, Inter. 46).		28 6	14 5	30	2		2		8		406 27 23	75C) No disease 189A)
Mumps (Class VIII, Inter. 19) Myasthenia gravis (Class XIII,	55	9,779	8,891	8,325				10	8,786	1,314	186, 457	Nystagnus Obesity (Cl
Inter. 63). Mycosis fungoides (Class XV, Inter. 25B).			1	100	100	,			120		4 27	Ustruction
Myelitis, disseminated (Class XIII, Inter. 63).		2	2 2				2		2		35	Obstruction, (Class III, (Class III, I Onychia (Class
												Oran

TABLE 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917—Continued.

1	1						accu.				
	Tal	cen up	as—			. [Disposit	ion.			days
	from .		-		ged.		Ħ		T	1 +2	
Diagnoses.	Remaining fi		d.		Diagnosis changed		from			Continued to next	r of sick this year.
	inin st y	ted.	Readmitted		sis c		lided service.		red	od to	of of nis y
	amai la	Admitted	adm	ty.	gno	d.	Invalided	-3	ısfer	inue	ye liber
	Ä.	Ad	Re	Duty.	Dis	Died.	Inv	Ran.	Transferred.	Cont	Number of this y
DISEASES—Continued.			13.							-	-
Myelitis, transverse (Class XIII, Inter. 63)	1										
Myocarditis, acute (Class II, In-		3	3		1	1			8	3	1 141
Myocarditis, chronic (Class II,		18	7	7	4	5			ϵ	3	3 166
Myopia (Class VI, Inter. 75C) Myositis, acute (Class XII In-	3	62 162	43 85	25 71	8 25.	5	29 86	1	30 60		8 1,370
Myositis, chronic (Class XII In	1	112	20	112	4.				15		8 2,569
Myringitis, acute (Class V Inter	1	23	15	18	1.		3.		16	1	2 800
Myringitis, chronic (Class V In-		11	7	11			1.		4		1 572 2 110
ter. 76). Myxoma (Class XIX, Inter. 46). Nausea marina (Class XVII, Inter. 1894).		1 2	1	1.					1	•	110
Nausea marina (Class XVII, Inter. 189A).	1	91	55	2.					î		17
Necrosis (Class XII, Inter. 146) Nephralgia (Class VII, Inter 122) Nephritis agute (Class VIII)	2	14	18	12	3		9		36 17	15	
ter. 119)	3	97	5 88	10 .				••••	3	i	52
Nephritis, chronic interstitial (Class VII, Inter. 120)	3	47	43	60	29	5	1		80	13	3, 267
tous (Class VII Inter 199)	2	75	75	27	6	2	14		37	. 7	2, 107
Nephritis, disseminated suppurative (Class VII, Inter. 122). Nephrolithiasis (Class VII, Inter. 122). ter. 123).			3	20	9	6	42		64	11	2,712
ter. 123)	2	51	57	35	10				2 -		95
Nephroptosis (Class VII, Inter.		8	4	5	13		6		47	9	1,394
Nervous dyspepsia (Class III, Inter. 103)	1	9	3	9			1		4 -		88
Neuralgia (Class XIII, Inter.		208	61	198	17		1		2 .		182
Neurasthenia (Class XIII, Inter.		265	244	197	30		4		49	4	2,048
Neuritis (Class XIII, Inter. 73B). Neuritis, multiple (Class XIII, Inter. 73B).		179	93	133	19		68 22		207 86	31 18	9,571 4,658
Neuritis, optic (Class VI, Inter. 75C)	1	7	11	10	2		2		4	1	289
Neuroretinitis (Class VI, Inter. 75C)		6	7	2	3		4		4		318
Neurosis, intestinal (Class III	2	7	9	5	1		3		8	1	465
Inter. 110B). Neurosis, occupational (Class XIII, Inter. 74).	1	33	14	2 6	3		5		11	3	423
Neurosis of bladder (Class VII, Inter. 124)		4	.1	1			3	.,		1	62
Neurosis of larynx (Class XIV, Inter. 87)	2 1	07	65	45	8		56	1	54	10	2,457
Neurosis, traumatic (Class XIII, Inter. 74)			1		•••		•			1	23
Inter. 74). Nevus (Class XV, Inter. 150) Night blindness (Class VI, Inter. 75C).		2	12	6	1		5		8	6	460
No disease (Class XVII Inton	-	1	1						2		15
189A). Nostalgia (Class XVII, Inter 68)	5 1,97	4 1,1			61		84	4 1,0	1	396 4	5 505
Nostalgia (Class XVII, Inter. 68) Nystagmus (Class VI, Inter. 75C) Obesity (Class XVII, Inter. 55). Obstruction. acute intestinal		3	1	3	i		1	-,0	1		3, 595 87
(Class III Inton 100)		6	3	3		-	2	-	4		49 47
Obstruction, chronic intestinal (Class III, Inter. 109) Onychia (Class XV, Inter. 145C).	1 1	0 1	1	13	1	5	1	. '	7.	1	317
TIME -1.1 (O) /	3	5	7	5	4	1			1	- 1	

TABLE 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917—Continued.

g	Ta	ken up	as-	,	sa qu n	I	Dispositi	ion,) AS	
		1 8	1		1 .	1 8	1 . 1	ULLY	1	1	days	
Diagnoses.	from r.	1 10			ange		from			next	er of sick this year.	
Diagnosos.	Remaining flast year.	d.	ted.		sche	*	ce.		ed.	I to	of si	
	last	litte	Imit		nosi	1	lided		sferr	nued t	oer th	
1 5 1 1	Rem	Admitted.	Readmitted.	Duty.	Diagnosis changed	Died.	Invalided	Ran.	Transferred.	Continued to next	Number	
DISEASES—Continued.								ottein	00-0	TRAIN .		
Onychoma (Class XV, Inter. 145C).	4						Line.	Regis	I Astron	-	-	
Opacity of virtreous humor (Class VI, Inter. 75C)		1		1							13	
Inter. 75C) (Class VI,					1		3	13037	2		141	
Orchitis els prio (127)		2		2	A SE				2		55	
Orchitis, chronic (nonvenereal) (Class VII, Inter. 127)	3		NAME OF		24		1		98	8	3,570	
Ossification of auricle (Class V, Inter. 76)		17	22	18	2	7	3 -		13	3	556	
Osteitis, deformans (Class XII,		1					1				16	
Ostearthropathy, hypertrophic (Class XVII, Inter. 36B).		2	2	1			1.		2		77	
Osteomyelitis, acute (Class XII, Osteomyelitis, acute (Class XII,	2	3 23	2 14	16	····i		3 -		2 12	····· 6	93 774	
Inter. 146)	. 3	15	15	12			1	Nestr	12	5		1
Osteomyelitis, chronic (Class XII, Inter. 146).	1	20	17	14			9.	TV 23	13	2	769	
Otitis, externa (Class V, Inter. 76). Otitis, intern acute (Class V, Inter. 76).	1	209	60	209	10				49	2		
Otitis, interna, chronic (Class V.		7	4	3	1				5	2	158	
Inter. 76)	1	17	23	17	2		7 -		14	1	451	
Inter. 76)	24	903	424	731	128		8	2	386	96	18,768	
Inter. 76) Oxyuriasis (Class XVIII, Inter. 107)	25	596	499	357	54 -		270		374	65	16,874	
Ozena (Class XIV, Inter. 86) Pachymeningitis, cerebral (Class		3 5	1 5	3 .			3		1 .		28 72	
A111, 111ter, 01)	1.						1	1	10		78	
Palpitation, cardiac (Class II, Inter. 85).	1	27	8	25	2 .		2 -	ini	6	1	297	
Pancreatitis, chronic (Class III, Inter. 118) Papilloma (Class XIX, Inter. 46)		3.	001 2	2.			708	2070	TITE !	1	195	
Pappataei fever (Class VIII, Inter. 19)		13	7	8	. 2				8	2	366	
Paralysis agitans (Class XIII		26	1	25	1.				1 -	Mero.	70	
Inter. 63)	1	2 -					3				60	1
Inter. 66)	1	53	47	35	3 -		11		42	10	1,966	P
Paralysis of vocal cords (Class	1	10	7	6.			4		7	1	514	Pe
XIV, Inter. 74)		1	1		100				1	1	2	Po.
Paramyocionus, multiplex (Class		1					1				73	Poli
Paranoia (Class XI Inter 68)		3 9	5 15	2	2		1 = .		3 13		53 389	Poly
Paranoiac state (Class XI, Inter. 68).		11	22	2	9		2		21	5	389	Prest
Paraphimosis (Class VII, Inter. 127) Paraplegia, ataxic (Class XIII,		41	17	37	3			THE Y	14	4	489	Proof
Inter. 66)	1 .,						199		19		54	Trut
Inter. 1)		20	19	4	15			SEE T	18	2	2040275	Tostat
Pellagra (Class VIII Inter 00)		42	8	42	1		1611 19	AL O	6	1	162	- Stati
Pellagra (Class VIII, Inter. 26) Pemphigus (Class XV, Inter. 145C)		2	2	1	2				1		163 37	Peanitus
145C)		6	4	6		1			3		352 P	Psychasts 68)
											,	

TABLE 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917—Continued.

	Та	ken uj	o as—				Dispositi	on.			days
Diagnoses.	Remaining from last year.	Admitted.	Readmitted.	Duty.	Diagnosis changed.	Died.	Invalided from service.	Ran.	Transferred.	Continued to next	
DISEASES—Continued.											
Perforated nasal septum (Class XIV, Inter. 86). Perlearditis (Class II, Inter. 77). Perlehondritis, of auricle (Class V, Inter. 76). Perihepatitis (Class III, Inter. 115). Periostitis, acute (Class XII, Inter. 146). Periostitis, chronic (Class XII, Inter. 146). Periostitis, caute general (Class III, Inter. 146).	1	2 2 74 30	2	3 3 2 1 70 19	8	3	. 11		3 8 2 1 37	2	2 19 3 434 30 1 31 4 1,829 651
III. Inter. 117)	•••••	4		•••••		4	4		•••••		. 3
III, Inter. 117)		3	1	1	1				2		95
Pes cavus (Class XII, Inter. 149) Pes planus (Class XII, Inter. 149) Pharyngitis, acute (Class III, Inter. 100).	13	795	644	271	26		553	4	524	74	24
Pharyngitis, chronic (Class III, Inter, 100)	• • • • •	366	50	341	10				45	20	1,815
Phimosis (Class VII, Inter. 127). Phlebitis (Class II, Inter. 83). Pityriasis rosea (Class VV	4	528 39	163 16	520 32	15 5		1 2	i	$\begin{array}{c} 1\\151\\12\end{array}$	$\begin{array}{c} 1 \\ 7 \\ 4 \end{array}$	
Inter.145C). Pityriasis, simplex (Class XV,		18	3	18					3 .		141
Inter. 145C). Pityriasis versicolor (Class XVIII, Inter. 25B).		1	1	1 -					1.		22
Pleurisy, acute fibrinous (Class XIV, Inter. 93)	••••	2.		2 .							19
XIV. Inter 93)	9	550	308	452	100		4		265	46	9,689
Pleurisy, serofibrinous (Class XIV, Inter. 93)	5	38	21	21	7	1	2		25	8	1,321
Pleurisy suppurative (Class XIV, Inter. 93).	2	123	100	60	46	4	2		97	16	3,350
Fleuritic adhesions (Class XIV	5	212	68	82	28	52	20	3	50	50	18,108
Inter. 93). Pneumonia, broncho (Class		27	14	20			3		12	6	412
XIV, Inter. 91). Pneumonia, interstitial (Class	3	459	200	250	95	67 .		1	187	62	11, 234
XIV, Inter. 98). Pneumonia, lobar (Class XIV,	• • • •	3	1	1		1.			1	1	193
Inter. 92) Poliomyelitis, acute anterior (Class VIII, Inter. 63) Poliomyelitis, abravia	28 1,	234	871	639	275	132	2	2 8	835	248	33, 166
Poliomyelitis, chronic anterior (Class VIII, Inter. 63)	2	5	4	5			. 1		2	3	554
		5			2		2		1		146
Polypus, nasal (Class XIV,		1	1			1			1		1
Presbyopia (Class VI. Inter	2	12	42	23	5				23	5	446
75C) Proctitis (Class III, Inter. 110A) Prolapse, of rectum (Class III,		$\frac{1}{12}$	7	9	2		2		1		11 358
Prostatitis acute (nonvenereal)		19	17	9	3	- 1	6	1	14	3	282
Prostatitis, chronic (nonvene		13	4	10	1				5 1	1	127
real) (Class VII, Inter. 126)		14	8	9	1				7	5	379
Pruritus (Class XV, Inter. 126) Pruritus (Class XV, Inter. 145C) Psychasthenia (Class XI, Inter.	3	8 26	11	27	1		2	. 1	4		71 336
68)	11	64	81	21	18		32		70		2,611
									-1		, 011

TABLE 1 .- DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917-Continued.

another a	Take	en up a	as—			Dis	spositio	on.			days	
Diagnoses.	Remaining from last year.	Admitted.	Readmitted.	Duty.	Diagnosis changed.	Died.	Invalided from service.	Ran.	Transferred.	Continued to next year.	Number of sick this year.	
DISEASES—Continued.								ostka	0-80	BAS		
Psychosis, due to organic brain disease (Class XI, Inter. 74)		6	11	1	2		2		8	4	1,078	
Psychosis, epileptic (Class XI, Inter. 69)		5	3	1	1		4	4	2		105	
Psychosis (exhaustive, infective, and toxic) (Class XI, Inter. 68).		11	20	8	, 4		5		12	2	366	
Psychosis, hysterical (Class XI, Inter. 73A).	2	12	10	9	1		5		7	2	426	
Psychosis, intoxication (Class XI, Inter. 68)												
Psychosis, manic depressive (Class XI, Inter. 68)	3	27	27	20	4		4	•••••	28	1	693	
(Class XI, Inter. 68)	1	40	67	2	12	1	15	1	61	16	1,733	
Psychosis, polyneuritic (Class XI, Inter. 68). Psychosis, senile (Class XI, Inter. 154A).		1	3	2						2	64	
Inter. 154A). Psychosis, traumatic (Class XI,		2	7	1	1				5	2	360	
Inter 68).	1	10	10	7 52			3		9	2	722 1,248	
Inter. 68). Pterygium (Class VI, Inter. 75C). Purpura (Class I, Inter. 55) Purpura, hemorrhagic (Class I,	6	48 6	36 6	7	5				32 4	1 1	103	
Inter. 55)		8	5	4	1	1			5	2 5	76	
Pyelitis (Class VII, Inter. 122) Pyelonephritis (Class VII, Inter.		32	. 26	22	7		1		23	5	989	
Pylorospasm (Class III, Inter.	1	7	11	8			1		7	3	369	
103)		2	3	2	1				2		90	
Pyorrhea, alveolar (Class III, Inter. 99A). Rabies (Class VIII, Inter. 23)	6	46	38	42	3		10		32	3	1,291	
Raynaud's disease (Class XVII,			1							1	13	
Inter. 147)		2	2				2	• • • • • • • • • • • • • • • • • • • •	2		50	
Iner. 127)	3	743	80	728	13				72	13	4,883	
III. Inter. 103)		1	4	1					4		69	
Inter. 46)		16	10	13	2				10	1	218	
Rheumatic fever, acute (Class	2	49	42	19	6		20	2	38	8	1,661	
VIII, Inter. 47)	13	894	728	792	125	1	10	1	580	126	27,768	
VIII, Inter. 47)	4	163	149	168	24	·····	9		103	12	5,277	
Rheumatism, chronic articular (Class XVII, Inter. 48B)	14	328	293	250	34		69		225	57	11,393	
Rheumatism, muscular (Class XVII, Inter. 149)	9	574	221	559	35		13	2	158	37	7,729	
Rhinitis, acute (Class XIV, Inter. 86)	1	212	27	216	1			10	18	5	877	
Rhinitis, atrophic (Class XIV, Inter. 86).		14	9	8	1		6	100	. 8	at tile	215	
Rhinitis hypertrophic (Class XIV, Inter. 86)	5	48	41	46	8		2		37	1	1,312	
Rhinoscleroma (Class XV, Inter.		1			1		ive	120	1	1911	56	
Rickets (Class XVII, Inter. 36C).		î	1 2		2		1				. 35	
Sarcoma (Class XIX, Inter. 39-45).	1	10	12	5	1	5	2		9	1	919	
Scabies (Class XVIII, Inter. 145B)	13	815	425	806	31			1	371	44	11, 274	
Scarlet fever (Class VIII, Inter. 7)		658	629	509	66	5		108 700	601	106	25,749	
Scleritis (Class VI, Inter. 75C) Scleroderma (Class XV, Inter.	1	6							4		75	1
145C)		1	3						3	1	52	1
Sclerosis, amyotrophic lateral (Class XIII, Inter. 63)			1							1	70	1
Sclerosis, disseminated (Class XIII, Inter. 63)	Service .	5		1	1	1	11-11-11		1	1	337	1

Sp. (Class Vertical Structure Stricture Strict

TABLE 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917—Continued.

	Tak	en up	as—			Di	spositi	on.			days
Diagnoses.	Remaining from last year.	Admitted.	Readmitted.	Duty.	Diagnosischanged.	Died.	Invalided from service.	Ran.	Transferred.	Continued to next year.	Number of sick this year.
DISEASES—Continued.											
Sclerosis, lateral (Class XIII, Inter. 63)		. ' 3	2 1	1 2			2		21	2	141 131
145C). Seminal, Emissions (Class VII, Inter. 127). Semilistra (Class VVII).		3 1	1	1					1		28
Senility (Class XVII, Inter. 154B). Septicemia (Class VIII, Inter 20) Shock (Class XVII, Inter. 189A). Sinus (Class XVII Inter. 145C). Shusitis of braids! (Class XVII)	1	16 37 5 18	11 21 27	6 13 4 18	₇	14	6 2		12 21 19	1	1,018 22 876
Sinusitis, ethmoidal (Class XIV, Inter. 146)	1	30	21	24	2		2		20	4	996
Sinusitis, maxillary (Class XIV,	2	177	111	164	15		3		93	15	4, 551
Inter. 146)	4	65	40	56	4		3		35	11	1,950
Inter. 146) Smallpox (Class VIII, Inter. 5). Somnambulism (Class XIII,		10 10	2	6	1	1			2	3	18 173
Inter. 74) Spasm habit (Class XIII, Inter.		11	3				11		3		180
74). Splanchnoptosis (Class III, Inter.		1 2	2	1		•••••			2		
Splenitis, acute (Class IV, Inter. 116).		2	2	1	1		1		2		62
Splenitis, chronic interstitial		2		2							25
Spur, on nasal septum (Class XIV, Inter. 86) Stammering (Class XIII, Inter.	2	5	4	8					3		10
74)		25	9	4			25		5		243
Staphyloma, of cornea (Class VI, Inter. 75C)		1	1	1					1		. (
Stenosis of gall-duct. (Class III, Inter. 115)		2	1	2					1		21
Inter, 25C)		3	2	. 1			1		2	1	43
Stenosis of punctum lacrimale (Class VI, Inter. 75C) Stenosis of pylorus (Class III, Inter. 103)		1	2	1	1				1		26
Stomatitis (Class III, Inter. 99B). Stricture of esophagus (Class III,	1	1 27	18	2 28		-	2		3 10	1	309 435
Inter. 101)		4	4		1		2		5		129
Inter. 122) Stricture of urethra (Class VII, Inter. 125)		10 37	41	36	7		3	1	7 28	3	667
Strongyloides intestinal (Class XVIII, Inter. 107)		3	1	2	'		1		1	. "	4
Stuttering (Class XIII, Inter. 74). Sudamina (Class XV, Inter.		5	î				4		î	1	74
145C). Suppression of urine (Class VII, Inter. 124).		4	2	3	1				1	1	18
Symblepharon (Class VI, Inter. 75C)		1	1	1					1		6
Synechia (Class VI, Inter. 75C). Syphilis (Class IX, Inter 37) Tachycardia (Class II, Inter. 85) Talipes (Class XII, Inter. 149) Teniasis (Class XVIII, Inter.	173	5	5	2,886 48	232 10		1 99 25 8	5	1,594 39 5	297 4	67, 345 1, 465 335
Teniasis (Class XVIII, Inter. 107)	. 1	59	23	63	4				14	2	613
149)	. 2	59	19	56	5		2		15	2	781

TABLE 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917—Continued.

Diagnoses	contrare	Tal	ken up	as-	- 20	de co	D	isposit	ion.			days
Teratoma (Class XIX, Inter. 46)	Diagnoses.		Admitted.	Readmitted.	Duty.	Diagnosis changed	Died.	.60	Ran.	Transferred,	Continued to next year.	of sick his year.
Thyroddisis, acute (Class IV, St. 1)	DISEASES—Continued.								TO STORE			
Inter. 140 10 10 10 10 10 10 10	Thrush (Class XVIII, Inter. 998) Thyroiditis, acute (Class IV, 88). Thyroiditis, chronic (Class IV, Inter. 88)		2	•••••	2 4 2 1	····i	1			i i		25 207 44 57
The constitution of spermatic cord, non-traumatic Class VII, Inter, 100, 100, 100, 100, 100, 100, 100, 10	Inter. 74)	1		1	1	•••••				1		70
Inter. 100	Tonsillitis, chronic (Class III	73	12,412	2,491	12, 108	293			5	2,108	462	67, 567
Tranhetic (Class VII, Inter 127)	Inter. 100)	5	340	194	334	_ 18		1		168	18	4,636
Trichopytosis (Class XVIII, Inter, 145A)	traumatic (Class VII, Inter 127) Tracheitis (Class XIV, Inter 89)				- 4	1				1		
Trichopytosis (Class XVIII, Inter, 145A)	Trachoma (Class VI, Inter. 75B). Trichiniasis (Class XVIII, Inter					13		13	1	29	i	
Trichuriasis (Class XVIII, Inter. 107).	10//		2	2	2		1			1		27
107 107 Trichuris, trichiura (Class XVIII, Inter. 107) 2	Inter. 145A). Trichuriasis (Class XVIII Inter	4	311	242	335	7				211	4	3,547
Inter. 107 Tuberculosis, abdominal (Class VIII, Inter. 31).	107)		4		3					1		17
VIII, Inter, 31	Inter. 107)		2		2							3
Tuberculosis, acute pneumonic (Class VIII, Inter. 29). Tuberculosis, acute and pulmonary miliary (Class VIII, Inter. 29). Tuberculosis, acute and pulmonary miliary (Class VIII, Inter. 29). Tuberculosis, chronic pulmonary (Class VIII, Inter. 29). Tuberculosis of bronchus (Class VIII, Inter. 28). Tuberculosis of bronchus (Class VIII, Inter. 28). Tuberculosis of joint (Class VIII, Inter. 28). Tuberculosis of joint (Class VIII, Inter. 28). Tuberculosis of larnyx (Class VIII, Inter. 28). Tuberculosis of larnyx (Class VIII, Inter. 28). Tuberculosis of pleura (Class VIII, Inter. 28). Tuberculosis of pleura (Class VIII, Inter. 28). Tuberculosis of spinal column (Class VIII, Inter. 32). Tuberculosis, unqualified (Class VIII, Inter. 32). Tuberculosis, unqualified (Class VIII, Inter. 31). Tuberculosis meningitis (Class VIII, Inter. 32). Tuberculosis meningitis (Class VIII, Inter. 30). Typhoid fever (Class VIII, Inter. 2) Typhous fever (Class VIII, Inter. 2) Typhous fever (Class VIII, Inter. 2) Typhus fever (Class VIII, Inter. 2) Ulcer of eye and adnexa (Class VIII, Inter. 2) Ulcer of eye and adnexa (Class VIII, Inter. 2) Ulcer of eye and adnexa (Class VIII, Inter. 2) Ulcer of nouth (Class III, Inter. 2) Ulcer of rectum (Class III, Inter. 2) Ulcer of rectum (Class III, Inter. 39B). Ulcer of rectum (Class III, Inter. 30 Ulcer of rectum (Class III, Inter	WIII Inton 91)				1	2		1	VLa	10	4	756
Tuberculosis, acute pneumonic (Class VIII, Inter. 29). Tuberculosis, acute and pulmonary miliary (Class VIII, Inter. 29). Tuberculosis, acute and pulmonary miliary (Class VIII, Inter. 29). Tuberculosis, chronic pulmonary (Class VIII, Inter. 28). Tuberculosis of bronchus (Class VIII, Inter. 28). Tuberculosis of bronchus (Class VIII, Inter. 28). Tuberculosis of joint (Class VIIII, Inter. 28). Tuberculosis of joint (Class VIIII, Inter. 28). Tuberculosis of larnyx (Class VIII, Inter. 28). Tuberculosis of pleura (Class VIII, Inter. 39). Tuberculosis of spinal column (Class VIII, Inter. 32). Tuberculosis of spinal column (Class VIII, Inter. 32). Tuberculosis of spinal column (Class VIII, Inter. 32). Tuberculosis meningitis (Class VIII, Inter. 30). Tuberculosis meningitis (Class VIII, Inter. 30). Typhoid fever (Class VIII, Inter. 2) Typhoid fe	Tuberculosis, acute general (Class)	2		30	1	9	5	1		35	6	949
Tuberculosis, acute and pulmonary (Class VIII, Inter. 29)	Tuberculosis, acute pneumonic			5			1			4	2	441
Tuberculosis, chronic pulmonary (Class VIII, Inter. 28).	nary miliary (Class VIII, Inter.	1						77		22	7	741
Tuberculosis of bronchus (Class VIII, Inter. 28)	'Tuberculosis, chronic pulmonary				-			79		Service State	4	561
Inter. 33	Tuberculosis of bronchus (Class VIII, Inter. 28)	203			67		47	403	4		269	Virtual R
Tuberculosis of pleura (Class VIII, Inter. 28). Tuberculosis, unqualified (Class VIII, Inter. 32). Tuberculosis, unqualified (Class VIII, Inter. 34). Tuberculous meningitis (Class VIII, Inter. 30). Typhoid fever (Class VIII, Inter. 2). Typhus fever (Class VIII, Inter. 2). Ulcer of duodenum (Class III, Inter. 105A). Ulcer of eye and adnexa (Class VII, Inter. 2). Ulcer of mouth (Class III, Inter. 39B). Ulcer of mouth (Class III, Inter. 39B). Ulcer of nasal passage (Class XIII, Inter. 39B). Ulcer of rectum (Class III, Inter. 31B). Ulcer of rectum (Class III, Inter. 31B). Ulcer of nasal passage (Class XIII, Inter. 31B). Ulcer of rectum (Class III, Inter. 31B). Ulcer of rectum (Class III, Inter. 31B).	Inter. 33)	2	17	13	3	2		7		13	7	1,148
VIII, Inter. 28)	VIII, Inter. 28)	2	4	6	1			4		6	1	598
Tuberculosis, unqualified (Class VIII, Inter. 30).	VIII, Inter. 28)	1	5	6	1	3		2		6		242
VIII, Inter. 30 2 1 2 1 2 2 1 2 2	(Class VIII, Inter. 32)		1	2	1					1	1	72
VIII, Inter. 30 2 1 2 1 2 2 1 2 2	VIII, Inter. 34)	8	21	30	13	6	-1	9		26	4	2,714
1) 66 28 49 9 1 29 6 3,485 1	VIII, Inter. 30)		2	1			2			1		2
Thieff. 105A Thieff. 105A	1)					9	1			29 1	6	3, 485
Ulcer of mouth (Class III, Inter. 99B)	Inter. 105A)	3	41	45	24	6	2	1		44	12	1,836
99B). Ulcer of nasal passage (Class XIV, Inter. 86). Ulcer of rectum (Class III, Inter. 2 4 4 3 3 3	VI, Inter. 75C)		76	48	74	3		3		39	, 5	1, 239
Ulcer of rectum (Class III, Inter.	99B)		14	- 10	11	3				8	2	237
110B) 5 9 5	XIV, Inter. 86)	2	4	4	3	3				3	1	200
Ulcer of skin (Class XV, Inter	110B). Ulper of skin (Class XV, Inter.		5	2	5.					1	1	120
145C)	145C)	11	135	76	126	11		1		60	24	4, 621

All
Ab
Abrasion
Abrasion, inter. 18
Abrasion, inter. 18
Abrasion, ixXX, inter. 18

 $\begin{array}{c} \text{Table 1.--Detailed statement of diseases and injuries for the} \\ \text{Calendar year 1917}\text{--} \text{Continued.} \end{array}$

											ω
	Tak	en up	as			Di	spositi	on.			days
Diagnoses.	Remaining from last year.	Admitted.	Readmitted.	Duty.	Diagnosis changed.	Died.	Invalided from service.	Ran.	Transferred.	Continued to next year.	Number of sick this year.
DISEASES—Continued.											
Ulcer of stomach (Class III, Inter. 102) Ulceromembranous, angina (Class III, Inter. 100)	8					4	18		86		5, 240 1, 393
Uncinariasis (Class XVIII, Inter, 106) Union of fracture faulty (Class XII, Inter, 146) Uretral colic (Class VII, Inter.	1	265 42		319 13			24		28 27	2 5	1,500 863
Urataritis (Class VII Inter 199)		9	6	4					2 3		98
Urethritis acute (nonvenereal) (Class VII, Inter. 125) Urethritis, chronic (nonvenereal) (Class VII, Inter. 125) Urticaria (Class XV, Inter. 145C). Vaccinia (Class VIII, Inter. 19) Valvular disease divergie, cardina		16			2				4		95 83
Urticaria (Class XV, Inter. 145C). Vaccinia (Class VIII, Inter. 19) Valvular disease chronic, cardiac	3	105 1,064	17 202		7				13 183		571 5, 736
Varcenia (Class VIII, Inter. 19). Valvular disease chronic, cardiac (Class II, Inter. 79A). Varicocele, (Class VII, Inter. 83). Varix (Class II, Inter. 83). Verruca, peruana (Class VIII, Inter. 189A). Vertigo (Class XVII, Inter. 189A). Ventigo (Class XVII, Inter. 189A).	11 5	597 161	178 487 178	560	16 45 12		290 14 35	1		48	
Inter. 55). Vertigo (Class XVII, Inter. 189A) Vomiting, recurrent (Class III, Inter. 103). Wart (Class XV, Inter. 145C)		3 27 2	1 9	24	2 2		2		8		10 249 14
Wart (Class XV, Inter. 145C) Whooping cough (Class VIII, Inter. 8) Zoster (Class XIII, Inter. 145C)		38	27	41	1 2			2	20	2	773 329
INJURIES.		22	4	21					4	1	132
Abrasion, ankle, "J" (Class XX, Inter. 186)			. 1	1							18
Abrasion axilla "L" (Class XX		5	1	5 1							33 5
Inter. 186)		1	3 1	3					1		10
Inter. 186). Abrasion, eye, "F" (Class XX, Inter. 186). Abrasion, eye, "J" (Class XX, Inter. 186). Abrasion, eye, "J" (Class XX, Inter. 186).		1	1	1					1		7
Thiasion, eye, L (Class A.A.,)		5	1	5							15 20
Inter. 186). Abrasion, face, "G" (Class XX, Inter. 186). Abrasion, face, "J" (Class XX, Inter. 186). Abrasion, face, "L" (Class XX, Inter. 186). Abrasion, finger, "E" (Class XX, Inter. 186). Abrasion, finger, "H" (Class XX Inter. 186).		1 2	1	2		 			1		12 7
Inter 186). Abrasion, finger, "E" (Class XX, Inter 186).		1		1 1							2
Abrasion, finger, "H" (Class XX, Inter. 186)		3	1	3					1 1		37 15
Abrasion, foot, "G" (Class XX, Inter. 186). Abrasion, foot, "J" (Class XX, Inter. 186). Abrasion, foot, "L" (Class XX, Inter. 186).		1		1							3
Abrasion, forearm, "H" (Class		30	4	30					3	1	263
XX, Inter. 186)		1	1		1				1		11

14

TABLE 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917—Continued.

	·			1		1	-				-
	Tak	ten up	as-		AND DE	I	isposit	ion.			days
Diagnoses.	Remaining from last year.	Admitted.	Readmitted.	Duty.	Diagnosis changed.	Died.	Invalided from service.	Ran.	Transferred.	Continued to next	Number of sick of this year.
INJURIES—Continued.								-	2 2 2	S A ST	
Abrasion, forearm, "L" (Class XX, Inter, 186). Abrasion, hand, "G" (Class XX, Inter, 186). Abrasion, hand, "H" (Class XX, Inter, 186). Abrasion, hand, "L" (Class XX, Inter, 186).		2 1 3									20 2 24
Abrasion, hip, "L" (Class XX,		13	1	18	3				1		57
Abrasion, hand, "L" (Class XX, Inter. 186). Abrasion, hip, "L" (Class XX, Inter. 186). Abrasion, knee, "G" (Class XX, Inter. 186). Abrasion, knee, "GR" (Class XX, Inter. 186). Abrasion, knee, "I" (Class XX, Inter. 186). Abrasion, knee, "J" (Class XX, Inter. 186). Abrasion, knee, "L" (Class XX, Inter. 186). Abrasion, knee, "L" (Class XX, Inter. 186). Abrasion, leg, "G" (Class XX, Inter. 186). Abrasion, leg, "G" (Class XX, Inter. 186).		6	1 2						1 2		3 59
Abrasion, knee, "I" (Class XX,		1		1							
Abrasion, knee, "J" (Class XX, Inter. 186)		3		1							3
Abrasion, knee, "L" (Class XX, Inter. 186).		3		3				•••••		•••••	29
Abrasion, leg, "G" (Class XX, Inter. 186). Abrasion, leg, "I" (Class XX,		9	3	9	34	•••••	•••••	•••••			18
Abrasion, leg, "I" (Class XX, Inter. 186). Abrasion, leg, "J" (Class XX, Inter. 182).		1.		1					3		181
Abrasion, leg, "J" (Class XX, Inter. 186). Abrasion, leg, "L" (Class XX,		1.		1				•••••			26
Abrasion, leg, "L" (Class XX, Inter. 186) Abrasion, mouth, "GR" (Class		8 -		7				2000	1		2
XX, Inter. 186)		1.		1				Tive i			29
Abrasion, mouth, "L" (Class XX, Inter. 186). Abrasion, mouth, "L" (Class XX, Inter. 186). Abrasion, multiple, "G" (Class XX Inter. 186).		1.		1				881	276		2
Abrasion, multiple "T" (Class		5	2	5	1		XX	stO)	1.	100	16
Abrasion, multiple "I." (Class		2 -		2							8
Abrasion penis "G" (Class VV		7	1	8							61
Abrasion penis "T." (Close VV		1.		1							1
Abrasion, scalp, "J" (Class XX		3 -		2	1		.X.X.				14
Abrasion, shoulder, "I" (Class		1.		1							1
XX, Inter. 186). Abrasion, thigh, "G" (Class XX,		1 -		1							4
Inter. 186). Abrasion, thigh, "J" (Class XX,		3		3			7.4.				25
Abrasion, toe, "I" (Class XX,		1		1					200		3
Abrasion, tingn, "J" (Class XX, Inter, 186). Abrasion, toe, "I" (Class XX, Inter, 186). Abrasion, toe, "J" (Class XX, Inter, 186). Abrasion, toe, "L" (Class XX, Inter, 186).		1	1	1					1		3
Abrasion, toe, "L" (Class XX, Inter. 186)		10								1	2
Abrasion, unqualified, "G" (Class XX, Inter. 186). Abrasion, unqualified, "G" (Class XX, Inter. 188). Abrasion, unqualified "H"		20	1	11 .							70
(Class XX, Inter. 186)		1	3	1				•••••	3		114
Abrasion, unqualified, "I" (Class XX, Inter. 186)		1		1.			× × ·				6
Abrasion, unqualified, "J" (Class XX, Inter. 186)		1		1.							9
Abrasion, unqualified, "L" (Class XX, Inter. 186). Avulsion of arm, "I" (Class XX,		15		15.				101			6
AA, IHIEL. 180)			1			1	MO T	19 1			133
XX, Inter. 186) (Class		1				1					2

B Burn, Surn, Surn,

TABLE 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917—Continued.

onlibage	Ta	ken up	as—	-21	gra	del]	Disposit	tion.			days
Diagnoses.	Remaining from last year.	Admitted.	Readmitted.	Duty.	Diagnosis changed.	Died.	Invalided from service.	Ran.	Transferred.	Continued to next	Number of sick de
INJURIES—Continued.				1.			l a	la tra	0-20	Blu	11
Avulsion of finger, "H" (Class XX, Inter. 186). Avulsion of finger, "I" (Class XX, Inter. 186). Avulsion of finger, "L" (Class XX, Inter. 186). Avulsion of forearm, "H" (Class XY, Inter. 187).		12 7	1		6	1			. 2		115
Avulsion of forearm, "L" (Class			2						. 2		25 21
XX, Inter. 186)			1	1						1	18 34
Avulsion of leg "L" (Class XX		. 1	3	1		1	. 1		2		15 101
Avulsion of nail "L" (Class XX, Inter. 186).	1	1		1			. 1		1		45
Avulsion of tubercle of tibia "L" (Class XX, Inter. 186). Avulsion of toe "L" (Class XX, Inter. 186).		1		1							11
Avulsion, unqualified, "H" (Class XX, Inter. 186). Avulsion, unqualified, "I" (Class XX, Inter. 186).	1	4	2	4					2	1	42 247
XX, Inter. 186) Avulsion unqualified, "L" (Class XX, Inter. 186) Burn, abdomen, "L" (Class XX, Inter. 187)		1		1							16 26
Burn, ankle, "C" (Class XX, Inter. 167).		1	5	5							29
Burn, ankle, "F" (Class XX, Inter. 167) Burn, ankle, "L" (Class XX, Inter. 167) Burn, arm, "C" (Class XX, Inter. 167)		1 . 16	1	16						1	15
Burn, arm, "C" (Class XX, Inter 167). Burn, arm, "F" (Class XX, Inter 167).		2		2							189
Burn, arm, "L" (Class XX, Inter. 167)		27	1	1 26					1	1	7 205
Inter, 167). Burn, back, "L" (Class XX, Inter, 167). Burn, chest, "F" (Class XX, Inter, 167).		1 .	2	1 15					2	1	4 90
Burn, chest, "L" (Class XX,		1.		1 2							12
Burn, elbow, "F" (Class XX, Inter. 167)		1.		1							49
Inter. 167). Burn, eye, "F" (Class XX, Inter. 167) Burn, eye, "L" (Class XX, Inter. 167).		5.		5			22			1	30 27
Burn, face, "C" (Class XX, Inter. 167) Burn, face "F" (Class XX,		21	7	20	3				4	1	275 19
Burn, face "L" (Class YY		4	1 3	3 .				28/17	2.	1	23
Inter. 167). Burn, finger, "F" (Class XX, Inter. 167).		1]	il.].]	108

TABLE 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917—Continued.

	Take	en up s	as—			Dis	positio	on.			days
Diagnoses.	Remaining from last year.	Admitted.	Readmitted.	Duty.	Diagnosis changed.	Died.	Invalided from service.	Ran,	Transferred.	Continued to next	Number of sick this year.
INJURIES—Continued.											
Burn, finger, "L" (Class XX, Inter. 167)		14	2	15					1		19
Inter. 167)		2		2							. 1
Intér. 167)		2		2							
Burn; foot, "L" (Class XX, Inter. 167)		. 80	. 9	82					6	1	1,07
Inter. 167). Surn; foot, "L" (Class XX, Inter. 167). Surn, forearm, "F" (Class XX, Inter. 167). Surn, forearm, "L" (Class XX, Inter. 167). Inter. 167).		1		1							1
Burn, forearm, "L" (Class XX, Inter, 167)		22	2	23					1		23
Intér. 167)		7		6	,				1		4
Intér. 167)		2		2							2
Inter. 167)		61	5	58					6	2	49
Inter. 167)urn, head, "F" (Class XX,		4		4							
Inter. 167)		1		1		,					
urn, hip, "F" (Class XX, Inter.		1		1							
urn, hip, "L" (Class XX, Inter.		2		1							
urn, leg, "C" (Class XX, Inter.		1		0							
urn, leg, "F" (Class XX, Inter.		1		1							
urn, leg, "L" (Class XX, Inter.		1	2						2		
urn, mouth, "L" (Class XX,		23	1	21	.,				.2	1	1
urn, multiple, "C" (Class XX,		1		1							
Inter. 167)		4	1	3					2		
XX, Inter. 167)		2		,2							
Inter. 167)		1		1		,					
Inter. 167)	7	44	27	55	1	3			15	4	1,1
XX, Inter. 167)		8				- 8					
XX, Inter. 167)		1							1		
Intér, 167). urn, multiple, "FS" (Class XX, Inter, 167). urn, multiple, "GR" (Class XX, Inter, 167). urn, multiple, "L" (Class XX, Inter, 167). urn, neek, "L" (Class XX, Inter, 167).	1	99	22	. 86	2	4			23	7	1,4
111001. 101/		4		3					1		
Inter. 167) urn, penis, "L" (Class XX, Inter. 167) urn, rectum, "L" (Class XX, Inter. 167) urn, srotum, "L" (Class XX,		8	4	6	1				4	1	
Inter. 167)		1		1							
Inter 167)		4		3					1		
urn, shoulder, "L" (Class XX, Inter. 167)		6	2	7						1	1
Surn, thigh, "C" (Class XX, Inter. 167)		1	1	1						1	
Burn, thigh, "F" (Class XX, Inter. 167)		1		1							
Burn, thigh, "L" (Class XX,		7		. 7							1
Inter. 167) Burn, toes, "L" (Class XX, Inter. 167)		5		. 4					1		
3urn, unqualified, "C" (Class			1	1 7							-
Burn, unqualified, "E" (Class XX, Inter. 167)		١.,									

TABLE 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917—Continued.

	Tak	en up	as-			Di	ispositi	ion.			days
Diagnoses.	Remaining from last year.	Admitted.	Readmitted.	Duty.	Diagnosis changed.	Died.	Invalided from service.	Ran.	Transferred.	Continued to next	Number of sick this year.
INJURIES—Continued.											
Burn, unqualified, "F" (Class XX, Inter. 167) Burn, unqualified, "L" (Class XX, Inter. 167) Burn, wrist, "F" (Class XX,	3		9	78	1				. 5	1	82
Unter 167) Burn, wrist, "L" (Class XX,		5		1							
Inter. 167)		1	1		1				1		į į
Compression, brain, "I" (Class XX, Inter. 186) Compression, brain, "L" (Class	:	2	3	2	1				2		2
Compression, brain, "L" (Class XX, Inter. 186)		, 1	1		1				1		
XX, Inter. 186)		1		1							
		1		1							
Compression, multiple, "G" (Class XX, Inter. 186)		1		1							
XX, Inter. 186)	1	• • • • • •	1	2							
XX, Inter. 186)		1							1		
XX, Inter. 186). Compression, stomach, "I" (Class XX, Inter. 186) Compression, thorax, "L" (Class XX, Inter. 186) Compression, unqualified, "G" (Class XX, Inter. 186) Compression, wrist, "H" (Class XX, Inter. 186). Contusion, abdomen, "G" (Class XX, Inter. 186).		2	1	1					2		
Compression, unqualified, "G"		2 1					2				
Compression, wrist, "H" (Class XX. Inter 186)		1	1	1					1	. 1	
Contusion, abdomen, "G" (Class XX, Inter. 186)		27	8		2				8	1	2
XX, Infer. 186) Contusion, abdomen, "GR" (Class XX, Inter. 186) Contusion, abdomen, "H" (Class XX, Inter. 186) Contusion, abdomen, "I" (Class XX, Inter. 186) Contusion, abdomen, "I" (Class XX Inter. 186)		1							1		
XX, Inter. 186)		5		4					1		
XX, Inter. 186)		2		. 2							
XX, Inter. 186)		11	3	11				,	2	1	10
XX, Inter. 186)		18	6	18	•••••				5	1	10
Contusion, abdomen, "L" (Class XX, Inter. 186)		1		1							
XX, Inter. 186) Contusion, ankle, "G" (Class		1		•••••					1	• • • • • •	,
XX, Inter. 186)		10	4	10	1				2	. 1	10
XX, Inter. 186)		3	. 3	5	•••••	•••••				-1	
VV Inter 100)		17 6	1	15 2						2	1
XX Inter 186)		30	7	36	1				4		2
contusion, arm, "G" (Class XX. Inter. 186)		9	1	9					1		
Contusion, arm, "H" (Class		2		2					أ		
contusion, arm, "I" (Class XX, Inter. 186) Contusion, arm, "J" (Class XX,		2		2							
Contusion, arm, "J" (Class XX, Inter. 186)		3		3							1
Contusion, arm, "L" (Class XX, Inter. 186)		10	* 1	10					1		

TABLE 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917—Continued.

antiesel antiesel	Take	en up	as—	- yan q	n ned	Dis	position	n.			days
Diagnoses.	Remaining from last year.	Admitted.	Readmitted.	Duty.	Diagnosis changed.	Died.	Invalided from service.	Ran.	Transferred.	Continued to next year.	Number of sick this year.
INJURIES—Continued.							.be	unitend	0_60	LEDE	
Contusion, back, "E" (Class XX, Inter. 186). Contusion, back, "F" (Class XX, Inter. 186). Contusion, back, "G" (Class XX, Inter. 186). Contusion, back, "H" (Class Contusi		1 1 65		65	1				1 16	3	2 3 725 2
XX, Inter. 186). Contusion, back, "I" (Class XX, Inter. 186). Contusion, back, "J" (Class XX, Inter. 188). Contusion, back, "L" (Class XX, Inter. 186).		9 6	3						3 8	1	68 33 385
Contusion, chest, "G" (Class XX, Inter. 186)		24	10		1				7	1	299 27 17
Contusion, chest, "I" (Class XX, Inter. 186). Contusion, chest, "J" (Class XX, Inter. 186). Contusion, chest, "L" (Class XX, Inter. 186). Contusion, car, "J" Class XX, Inter. 186).		10		7	1				1		43 96 1
Inter. 186). Contusion, ear, "L" (Class XX, Inter. 186). Contusion, elbow, "G" (Class XX, Inter. 186). Contusion, elbow, "H" (Class XX Inter. 186).		2		23 23				Della		To less	5 189 5
XX, Inter. 186). Contusion, elbow, "H" (Class XX, Inter. 186). Contusion, elbow, "HS" (Class XX, Inter. 186). Contusion, elbow, "I" (Class XX, Inter. 186). Contusion, elbow, "J" (Class XX, Inter. 186). Contusion, elbow, "L" (Class XX, Inter. 186). Contusion, elbow, "L" (Class XX, Inter. 186).			1 7 6	1 8	3 5					1	20° 62 34
Contusion, elbow, "L" (Class XX, Inter, 186) XX, Inter, 186) Contusion, eye, "F" (Class XX XX, Inter, 186) Contusion, eye, "G" (Class XX Inter, 186) Contusion, eye, "H" (Class XX Inter, 186) Contusion, eye, "I" (Class XX Inter, 186) Contusion, eye, "J" (Class XX Inter, 186) Contusion, eye, "L" (Class XX Inter, 186)	,	. 1	1 5		1	-	-		1	2	49 1 11
Contusion, eye, "H" (Class XX Inter. 186) Contusion, eye, "I" (Class XX Inter. 186) Contusion, eye, "J" (Class XX Inter, 186).	,		1 4 3	2	2 3	1				3	23 31
Inter. 186)			2		2	1		2	- (88 - 950 - 100 - 100 - 100 - 100	8	2 322 6 52
XX, Inter. 186). Contusion, face, "G" (Clas XX, Inter. 186). Contusion, face) "H" (Clas XX, Inter. 186). Contusion, face, "I" (Class XX Inter. 186). Contusion, face, "J" (Class XX Inter. 186).			2 2 4	1	2					1	7 4 9
Inter. 186) Contusion, face, "L" (Clax XX, Inter. 186) Contusion, fingers, "G" (Clax XX, Inter. 186). Contusion, fingers, "H" (Clax XX, Inter. 186).	38		15 5	2	3			1		1 1 1	1 55 1 45 84

Table 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917—Continued.

when the same of t	1					•					
	Tak	en up	as—			Di	sposit	ion.			days
Diagnoses.	from ar.		d.		Diagnosis changed.	-	from e.		I.	to next	1
	Remaining f last year.	Admitted.	Readmitted	ty.	gnosis	d.	Invalided service.	n.	Transferred.	Continued to next	Number of sick this year.
	Re	Ad	Re	Duty.	Dig	Died.	Inv	Ran.	Tra	Cor	Nu
INJURIES-Continued.											
Contusion, fingers, "I" (Class XX, Inter, 186).		37	1	37						1	284
XX, Inter. 186) Contusion, fingers, "J" (Class XX, Inter. 186) Contusion, fingers, "L" (Class		5									209
X X Inter 186)		36	3	36					3		291
Contusion, foot, "E" (Class XX, Inter. 186.). Contusion, foot, "G" (Class		10	1	10						1	295
A.A. Inter. 186)		36	3	35	. 1				3		235
XX, Inter. 186) Contusion, foot, "I" (Class XX.		12	2	11					3		80
Inter. 186)		102		99	2	• • • • • • •			8	4	870
Inter. 186). Contusion, foot, "L" (Class		7	. 3	8					1	1	49
XX, Inter. 186) Contusion, forearm, "G" (Class		117	26	116	7		•••••		17	3	1,084
XX, Inter. 186) Contusion, forearm, "H" (Class XX Inter. 186).		3	1 2	4							12
XX, Inter 186) Contusion, forearm, "I" (Class XX, Inter 186).		7		6					1		54 22
XX, Inter. 186) Contusion, forearm, "J" (Class XX, Inter. 186)		2	1	2					1		68
XX, Inter. 186) Contusion, forearm, "L" (Class XX, Inter. 186)		12	1	10	1				1	1	78
XX, Inter 186). Contusion, hand, "F" (Class XX, Inter 186). Contusion, hand, "G" (Class XX, Inter 186).		1		1							5
XX, Inter. 186)		10	, 2	12							59
Contusion, hand, "H" (Class XX, Inter. 186)		15		15							121
XX, Inter. 186)		21	2	20	1				2		123
XX, Inter. 186) Contusion, hand, "L" (Class		9	1	9					1		26
Contusion, head, "F" (Class		45	3	45	1				2		262
Contusion, head, "G" (Class		1		• 1	•••••						3
XX, Inter. 186)		18	8	16	1				6	_ 3	140
XX, Inter. 186)		3	1	3							7
A.A. ITHET, 1861.		8	1	8							62 15
Contusion, head, "L" (Class		22	11	25			1		7		296
XX, Inter. 186)		22	3	18	1		, ,		4	2	185
Contusion, hip, "H" (Class XX, Inter. 186)		2		2							7
Contusion, hip, "1" (Class XX, Inter. 186) Contusion, hip, "J" (Class XX,		4		3						1	10
Inter. 186)		1		1							3
Inter. 186) Contusion, hip, "L" (Class XX, Inter. 186) Contusion, inguinal, "G" (Class		19	6	22			•••••		3		310
Contusion, inguinal, "G" (Class XX, Inter. 186) Contusion, jaw, "G" (Class XX,		1		1						•••••	5
Contusion, jaw, "J" (Class XX,		3		2		•••••			1		14
Inter. 186)	اا	2		2							. 4

TABLE 1.-DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917—Continued.

	Take	n up a	s—			Dis	spositio	on.	· ·		days
Diagnoses.	Remaining from last year.	Admitted.	Readmitted.	Duty.	Diagnosis changed.	Died.	Invalided from service.	Ran.	Transferred.	Continued to next year.	Number of sick this year.
INJURIES-Continued.		-									
Contusion, jaw, "L" (Class XX, Inter. 186) Contusion, knee, "F" (Class XX, Inter. 186)		5 1	1	5	1				1		33
Contusion, knee, "G" (Class XX, Inter. 186)		88 5	22	83 5	4				20	3	878 42
XX, Inter. 186) Contusion, knee, "I" (Class XX, Inter. 186) Contusion, knee, "J" (Class		6	2	5					2 9	1	108 291
XX, Inter. 186) Contusion, knee, "K" (Class XX, Inter. 186)		22 1	6	19 1							1
XX, Inter. 186)		70 48	7 10	68 41	 2				9 12	3	411 646
Inter 186). Contusion, leg, "H" (Class XX, Inter, 186). Contusion, leg, "I" (Class XX, Inter, 186). Contusion, leg, "J" (Class XX, Inter, 186).		6 11	1 5	3 13	1 2				2	1	37 197
Contusion, leg. "L" (Class XX,		5	4 11	8 39	2				9	1	95 498
Inter. 186) Contusion, mouth, "G" (Class XX, Inter. 186) Contusion, mouth, "L" (Class		1	1	1					1		4 11
XX, Inter. 186). Contusion, multiple, "E" (Class XX, Inter. 186). Contusion, multiple, "F" (Class XX, Inter. 186).		1		1					2		5 26
Contusion, multiple, "G" (Class	. 1	66		100		. ,			18	5	880 24
Contusion, multiple, "GR" (Class XX, Inter. 186). Contusion, multiple, "H" (Class XX, Inter. 186). Contusion, multiple, "I" (Class		1	100000000000000000000000000000000000000	2					1		7
XX, Inter. 166)		. 4							3		161
XX, Inter. 186)		31	ļ		1				10		290 75
Contusion, neck, "I" (Class		. 1		1					2	1	62 2
XX, Inter. 186)		. 4		4							25
XX, Inter. 186) Contusion, nose, "G" (Class XX Inter. 186)				. 1		-					1
Contusion, nose, "H" (Class XX Inter. 186). Contusion, nose, "I" (Class XX Inter. 186). Contusion, neck, "J" (Class XX Inter. 186). Contusion, neck, "L" (Class XX Inter. 186). Contusion, rectum, "G" (Class XX, Inter. 186).		. 1		. 1			-				1
Inter. 186)	,		1 1		3					2	5 42
Contusion, rectum, "G" (Class XX, Inter. 186)	3	.	2 1	1 :	2	1			.l		9

Contact State of the contact of the

Table 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917—Continued.

	Tal	en up	as—				Disposi	tion.		,	days
	a		1		l ri	1	1_	1	1	1	
Diagnoses.	ng from		red.		change		from		d.	to next	of sick s year.
	Remaining fro	Admitted.	Readmitted	Duty.	Diagnosis changed	Died.	Invalided service.	Ran.	Transferred.	Continued to next year.	Number of sick this year.
INJURIES—Continued.							-			-	-
Contusion, scalp, "B" (Class											
XX, Inter. 186). Contusion, scalp, "G" (Class			1	1							1
XX, Inter. 186)		11	3	8	1						52
Contusion, scalp, "J" (Class XX, Inter. 186).		1		- 1							5
Contusion, scalp, "K" (Class XX, Inter. 186).		1		1							2
Contusion, scalp, "L" (Class XX, Inter. 186).		9	1								
Contusion, scrotum, "L" (Class XX, Inter. 186).		1	1	,					. 3	1	46
Contusion shoulder "E" (Close		1		1			• • • • • • • • • • • • • • • • • • • •				2
XX, Inter. 186). Contusion, shoulder, "G" (Class		1		1	•••••	••••					19
XX, Inter. 186). Contusion, shoulder, "H" (Class		31	9	29	1				. 7	3	329
XX, Inter. 186) Contusion, shoulder, "J" (Class		3	1	3					. 1		31
XX, Inter. 186).		10	4	13					. 1		82
XX, Inter. 186).		16	3	15	1				2	1	81
XX, Inter. 186).		4	1	4					1		15
Contusion, shoulder, "L" (Class XX, Inter. 186). Contusion, testicle, "G" (Class XX, Inter. 186). Contusion, testicle, "H" (Class XX, Inter. 186). Contusion, testicle, "J" (Class XX, Inter. 188). Contusion, testicle, "J" (Class XX, Inter. 188).		1		1					_		3
Contusion, testicle, "J" (Class XX, Inter. 186)		5	1	5		,					
Contusion, testicle, "L" (Class				. 10					1		36
Contusion, thigh, "E" (Class		. 11	1	10					2	••••	65
XX, Inter. 188). Contusion, testicle, "L" (Class XX, Inter. 186). Contusion, thigh, "E" (Class XX, Inter. 186). Contusion, thigh, "G" (Class XX, Inter. 186). Contusion, thigh, "H" (Class XX, Inter. 186). Contusion, thigh, "H" (Class XX, Inter. 186). Contusion, thigh, "J" (Class XX, Inter. 186). Contusion, thigh, "J" (Class XX, Inter. 186). Contusion, thigh, "L" (Class XX, Inter. 186). Contusion, thigh, "L" (Class XX, Inter. 186).		2		. 2			,				14
Contusion, thigh, "H" (Class		13	3	11					3	2	99
Contusion, thigh, "I" (Class		3		3							29
XX, Inter. 186)		7		6						1	125
XX, Inter. 186).		3		3							14
XX, Inter. 186)		23		21					1	1	154
Contusion, toes, "E" (Class XX, Inter. 186). Contusion, toes, "G" (Class XX, Inter. 196).		4		4						_	
Unitusion, toes, "G" (Class XX,		6		5							22
Contusion, toes, "H" (Class XX, Inter. 186). Contusion, toes, "I" (Class XX, Inter. 186). Contusion, toes, "L" (Class XX, Inter. 186).		4								1	57
Contusion, toes, "I" (Class XX,		9	1	9		•••••	•••••			1	76
Contusion, toes, "L" (Class XX,		40	4	40	,		1	-:	2	1	474
Contusion, unqualified, "B" (Class XX, Inter 186).		64	3	65					.2		327
(Class XX, Inter 186) Contusion, unqualified, "E"		1		, 1							2
Class XX, Inter, 186)		3 .		3							43
(Class XX, Inter, 186)		1	1	1					1		14
Contusion, unqualified, "G" (Class XX, Inter. 186)	6	119	19	121	3				18	2	1,290
Close VV Inter 1993, "H"	. 2	12	3	15							
Contusion, unqualified, "I"	3	58	3	58					- 1		152
Contusion, unqualified, "J"					2						463
(Class XX, Inter. 186) (Class XX, Inter. 186) (Class XX, Inter. 186) (Contusion, unqualified, "J" (Class XX, Inter. 186) (Class XX, Inter. 186) (Class XX, Inter. 186)	1	28	8	28	2	•••••	•••••		7		336
(5.405 2.2., 111001. 100)	5	152	19	154	5].				16	1	1, 293

TABLE 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917—Continued.

											{
	Take	n up a	s—			Dis	positio	n.			days
Diagnoses.	Remaining from last year.	Admitted.	Readmitted.	Duty.	Diagnosis changed.	Died.	Invalided from service.	Ran.	Transferred.	Continued to next year.	Number of sick this year.
INJURIES-Continued.											
Contusion, wrist, "E" (Class XX, Inter. 186) Contusion, wrist, "G" (Class XX, Inter. 186) Contusion, wrist, "H" (Class XX, Inter. 186) Contusion, wrist, "I" (Class XX, Inter. 186) Contusion, wrist, "L" (Class XX, Inter. 186) Crush, ankle, "I" (Class XX, Inter. 186)		1 7 1 4 13	1	1 6 1 4 12	1				1		9 33 9 26 111 21
Inter. 186)		1	1 2		1				1		61
Crush, arm, "E" (Class XX, Inter, 186). Crush, arm, "H" (Class XX, Inter, 186). Crush, arm, "I" (Class XX, Inter, 186). Crush, arm, "L" (Class XX,	1		2	2					1		68
Crush, arm, "I" (Class XX, Inter 186). Crush, arm, "L" (Class XX, Inter 186).		3	2						2		47 77
Crush, Dack, G (Class)		1	1	1							3
Crush, Chest, I (Class 2012)		3				. :	3				5
Inter. 186) Crush, chest, "L" (Class XX, Inter. 186) Crush, finger, "G" (Class XX,		1		. 1							124
Inter. 186) Crush, finger, "H" (Class XX Inter. 186). Crush, finger, "I" (Class XX	,	21		9 21					. 7	2	511
Crush, finger, "I" (Class XX Inter. 186).		33		2 2					. (2	481
Crush, finger, "L" (Class XX		. 8	3	1 :	8				-		97
Inter. 186) Crush, foot, "E" (Class XX Inter. 186) Crush, foot, "F" (Class XX Inter. 186) Crush, foot, "F" (Class XX											33
Crush, 100t, 11 (Class 1111	, ,		1		1						4
Inter. 186) Crush, foot, "I" (Class XX Inter. 186)	,		9	3	9				-	3	438
Crush, foot, "L" (Class XX Inter. 186)			5	6	3	1			-	5	509
Inter. 186)	,		2	1	3			2		1	55
Inter. 180) (Class XX			8	5	7	1		1		2	2 293
Crush, hand, "L" (Class XX Inter 186) (Class XX Inter 186) (Class XX Inter 186) (Class XX	,		5	2	4	1				1	1 136
Crush, knee, "1" (Class XX Inter 186 Crush, leg, "H" (Class XX			1		1						. 57 1 55
Crush leg "I" (Class XX	5.	1	5	3	2	2		1		3	1 120
Crush, leg, "L" (Class XX	ζ,	1	2		3						. 135
Crush, multiple, "FS" (Cla	SS		1				1				
Crush, multiple, "I" (Class XI Inter. 186)	-,		1						••	1	2 20
Inter. 186)	Χ,		1	1	1						1 246

Dislocation, XX, Inter Dislocation, XX, Inter Structure XX, Inter

Table 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917—Continued.

					. 00	,11011	iuea,				
	Tal	cen up	as—			Ι	Dispositi	on.			days
Diagnoses.	Remaining from last year.	Admitted.	Readmitted.	Duty.	Diagnosis changed.	Died.	Invalided from Service.	Ran.	Transferred.	Continued to next year.	Number of sick d
INJURIES—Continued.								-		0	Z
Crush, skull, "I" (Class XX, Inter. 186)		2	1			2					
Inter. 186). Crush, toe, "E" (Class XX, Inter. 186). Crush, toe, "H" (Class XX, Inter. 186). Crush, toe, "I" (Class XX, Inter. 186). Crush, toe, "L" (Class XX, Inter. 186). Crush, unqualified, "I" (Class XX, Inter. 186). Crush, unqualified, "L" (Class XX, Inter. 186).		1 .		1					1	• • • • •	20
Inter 186)		2	2	2						•••••	31
Inter. 186) Crush, toe "L" (Class XX,		13	1	13	1				2		92
Inter. 186) Crush, unqualified "I" (Class XX,		3.		2	1			••••			193
XX, Inter. 186) Crush, unqualified "L" (Class)		3.									46
XX, Inter. 186) Dislocation, ankle, "G" (Class		1							3		1
		1	1				1		1		
Dislocation, ankle, "I" (Class XX, Inter. 185A) Pislocation, ankle, "I" (Class			1	1			1		1		20
Dislocation, ankle, "J" (Class XX, Inter. 185A) Dislocation, ankle, "L" (Class		2	1						2	1	17
XX, Inter. 185A). Dislocation, cartilage (intra-art)	1	3	2	4			1		.	1	26
AX, Inter. 185A). Islocation, ankle, "J" (Class XX, Inter. 185A). Dislocation, ankle, "L" (Class XX, Inter. 185A). Dislocation, cartilage (intra-art), "G" (Class XX, Inter. 185A). Dislocation, cartilage (intra-art), "I" (Class XX, Inter. 185A). Dislocation, cartilage (intra-art), "J" (Class XX, Inter. 185A). Dislocation, cartilage (intra-art), "L" (Class XX, Inter. 185A). Dislocation, cartilage (intra-art), "L" (Class XX, Inter. 185A). Dislocation, clavicle, "G" (Class XX, Inter. 185A). Dislocation, clavicle, "J" (Class XX, Inter. 185A). Dislocation, elbow, "G" (Class XX, Inter. 185A). Dislocation, elbow, "H" (Class XX, Inter. 185A). Dislocation, elbow, "J" (Class XX, Inter. 185A). Dislocation, elbow, "J" (Class XX, Inter. 185A). Dislocation, elbow, "L" (Class XX, Inter. 185A). Dislocation, elbow, "L" (Class XX, Inter. 185A). Dislocation, elbow, "L" (Class XX, Inter. 185A).	1	3	3	2			2		3	1	86
"I" (Class XX, Inter. 185A). Dislocation, cartilage (intra-art)			1	1					0		192
"J" (Class XX, Inter. 185A). Dislocation, cartilage (intra-art)		4	3	4			1		2		30
"L" (Class XX, Inter. 185A). Dislocation, clavicle, "G" (Class		4	2	2			4				130
XX, Inter. 185A) Dislocation, clavicle "H"		3	2	1			1		3		87
(Class XX, Inter. 185A) Dislocation, clavicle, "I" (Class		1							1		72
XX, Inter. 185A) Dislocation, clavicle, "L" (Class	1	5	4	6					4		110
XX, Inter. 185A) Dislocation, elbow, "G" (Class)		2		1					1	1	110
XX, Inter. 185A) Dislocation, elbow, "H" (Class)		13	9	10	3		2		7		85
XX, Inter. 185A) Dislocation, elbow, "J" (Class)		1	2	2					1		310 66
XX, Inter. 185A) Dislocation, elbow, "L" (Class	1	8	3	8			1		3		326
XX, Inter. 185A). Colass XX, Inter. 185A) Dislocation, facial, "H" (Class XX, Inter. 185A) Dislocation, hip, "G" (Class XX, Inter. 185A) Dislocation, hip, "L" (Class XX, Inter. 185A) Dislocation, jaw, "G" (Class XX, Inter. 185A) Dislocation, jaw, "G" (Class XX, Inter. 185A)		9	6	8	1		2		4		176
Dislocation, hip, "G" (Class		1							1	-	170
XX, Inter. 185A) Dislocation, hip, "L" (Class		1		1						1	10
XX, Inter. 185A). Dislocation, jaw, "G" (Class		2	1	1			1	:	1		32
XX, Inter. 185A). Dislocation, jaw, "J" (Class XX		1	1	2							21
Dislocation, jaw, "J" (Class XX, Inter. 185A). Dislocation, jaw, "L" (Class			1	1							52
Inter 185Å). Dislocation, jaw, "L" (Class XX, Inter 185Å). Dislocation, knee, "G" (Class XY L')			1	-	1						8
Dislocation, knee, "H" (Class		10 1	12	9	2		2				555
Dislocation, knee, "J" (Class		1	1	-	1			1			1
A., Inter. 185A) Dislocation, knee, "G" (Class XX, Inter. 185A) Dislocation, knee, "H" (Class XX, Inter. 185A) Dislocation, knee, "J" (Class XX, Inter. 185A) Dislocation, knee, "L" (Class XX, Inter. 185A) Dislocation, knee, "L" (Class XX, Inter. 185A)	-	3	1 . 5	2				2			90
/	- 1 1	4 1	2 1	ı	1		2 1				446
87068—18——14										200	

TABLE 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917—Continued.

		DAR	YEA.	R 19:	17—C	ontir	ued.	-149 U	KIES	FOR	THE
	Та	ken up	as-	-		I	Disposit	ion.		,	1 00
	from			-	Ġ.	1	_	1	1		days
Diagnoses.	fr.		_:		ange		from			ext	ick r.
	Remaining fr last year.	ed.	Readmitted.		s ch		ice.		d.	ton	of s
	mai	Admitted.	dmi	, ×	nosi	١.	ided		ferre	nued t	er c
	Re	Ad	Rea	Duty.	Diagnosis changed	Died.	Invalided Service.	Ran.	Transferred.	Continued to next year.	Number of sick this year.
INJURIES—Continued.							H -	H	E	3	ž
Crush, skull, "I" (Class XX,		- 1	-								
Inter. 186) Crush, thigh, "H" (Class XX, Inter. 186)		2 -				2					
Inter. 186) "H" (Class XX, Inter. 186) "E" (Class XX, Inter. 186) "E" (Class XX, Inter. 186) "Crush, toe, "H" (Class XX)			1.						1		
		1		1.							20
Crush, toe, "I" (Class XX, Inter 186) (Crush, toe, "L" (Class XX,		2	2	2.					2		31 92
Inter. 186) (Class XX,		13	1	13	1						193
XX, Inter. 186). (Class		3		2	1						46
XX, Inter. 186). "L" (Class		3							3		1
Chish, toe, "L" (Class XX, Inter, 186). Crush, unqualified, "I" (Class XX, Inter, 186). Crush, unqualified, "L" (Class XX, Inter, 186). XX, Inter, 186). Dislocation, ankle, "G" (Class XX, Inter, 185A). Sislocation, ankle, "I" (Class XX, Inter, 185A). Sislocation, ankle, "J" (Class XX, Inter, 185A). Dislocation, ankle, "L" (Class XX, Inter, 185A). Dislocation, ankle, "L" (Class XX, Inter, 185A). Dislocation, ankle, "L" (Class XX, Inter, 185A).		1							1		1
XX, Inter. 185A)		1	1				1		1		20
XX, Inter. 185A)		2	1	1	•						17
XX, Inter. 185A)	1	3	1						2	1	26
Digles 185A)	1	3	3	4			1			1	86
Dislocation, cartilage (intra-art), "I" (Class XX, Inter. 185A) Dislocation, cartilage (intra-art)			1	2			2		3		192
"J" (Class XX, Inter, 185A)		4	3	1	•						30
"I" (Class XX, Inter. 185A). Dislocation, cartilage (intra-art), "J" (Class XX, Inter. 185A). Dislocation, cartilage (intra-art), "L" (Class XX, Inter. 185A). Dislocation, clavicle, "G" (Class XX, Inter. 185A).		4	2	4	•••		1		2		130
XX, Inter. 185A) Dislocation, clavicle, "H"		3	2	1			4				87
Dislocation, clavicle, "H", (Class XX, Inter. 185A) Dislocation, clavicle, "H",		1	~	1			1	-	3		72
Olass AX, Inter. 185A). Dislocation, claricle, "J." (Class XX, Inter. 185A). Dislocation, claricle, "L." (Class XX, Inter. 185A).	1	_	4	6				-	1		••
Jislocation, claricle, "L" (Class XX, Inter. 185A), Dislocation, elbow, "G" (Class XX, Inter. 185A), Dislocation, elbow, "H", GU		2		1	•			-	4	- 1	10
Dislocation, elbow, "H" (Class	- 1	3 9	1	0	3				-	1 . 8	85
Dislocation, elbow, "J" (Class	. 1	1 2		2	1		2	1	7	- 31	10 .
AX, Inter. 185A) Dislocation, elbow, "H" (Class XX, Inter. 185A) Dislocation, elbow, "J" (Class XX, Inter. 185A) Dislocation, elbow, "L" (Class XX, Inter. 185A) Dislocation, facial "H" (Class	1 8	3	8	3				1		6	66
Sisteration, einow, "L" (Class XX, Inter. 185A) Dislocation, facial, "H" (Class XX, Inter. 185A) Dislocation, hip, "G" (Class XX, Inter. 185A) Dislocation, hip, "L" (Class Dislocation, hip, "L" (Class Dislocation, hip, "L")	9	6	8	1				3		32	6
Dislocation, hip, "G" (Class	1							. 4		170	8
XX, Inter. 185A) Dislocation, hip, "L" (Class XX, Inter. 185A) Dislocation, jaw, "G" (Class XX, Inter. 185A)	1		1				,	1			
XX Int., jaw, "G" (Class	2	. 1	1			1	-	1		10	
Inter 1854) (Class XX,	1	1	2					. 1		32	
Dislocation, jaw, "L" (Class		1	1							21	
		1.		1	··					52 8	
Dislocation, knee, "G" (Class XX, Inter. 185A) Dislocation, knee, "H" (Class XX, Inter. 185A) Dislocation, knee, "J" (Class XX, Inter. 185A)	10	12	9	2		2		9		555	
ZX, Inter. 185A) (Class	1	1		1.				1.			
Jacobs and the state of the sta	3	1	2 -	-				2		90	
87068—18——14	14	12	11	1.		2	1	9	2	446	
										-40	

TABLE 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917—Continued.

Anni Kana	Ta	ken up	as-	Disposition,									
Diagnoses,	Remaining from last year.	Admitted.	Readmitted.	Duty.	Diagnosis changed.	Died.	Invalided from service.	Ran.	Transferred.	Continued to next	Number of sick days this year.		
INJURIES—Continued.													
Dislocation, metacarpal, "L" (Class XX, Inter. 185A)								1					
Dislocation, metatarsal, "G"		4		4	1						18		
Dislocation, metatarsal, "G" (Class XX, Inter. 185A) Dislocation, metatarsal, "I"		1		1	L						111		
(Class XX Inter 1854)		1		1	L						5		
Dislocation, metatarsal, "L" (Class XX, Inter. 185A) Dislocation, multiple, "G"		1	1	1			37	Take O	1		100		
(Class X.X. Inter. 185A)		1					177	700	1		3		
Dislocation, multiple, "J" (Class XX, Inter. 185A)			1						1				
Dislocation, nasal, "G" (Class			1	*****		******				1	70		
XX, Inter. 185A) Dislocation, nasal, "J" (Class			1						1				
XX, Inter. 185A). Dislocation, phalanges. "G"			1						1				
Dislocation, phalanges, "G" (Class XX, Inter. 185A) Dislocation, phalanges, "I"		3		1					1	1	3		
(Class XX, Inter. 185A) Dislocation, phalanges, "J"		1		1							7		
(Class XX, Inter. 185A)		3		2			Total in	Ting a	1	trans.	37		
Dislocation, phalanges, "L" (Class XX, Inter, 185A)		6	5	6			1000	1	3	2			
(Class XX, Inter, 185A)		2		0					,	4	123		
Dislocation, rib, "J" (Class		4		2							11		
Dislocation, rib, "J" (Class XX, Inter. 185A) Dislocation, rib, "L" (Class XX, Inter. 185A)	•••••	1		1							4		
XX, Inter. 185A) Dislocation, shoulder, "G"		2	2	1					2	1	101		1 .
(Class XX, Inter. 185A)	1	42	18	37	1		4		16	3	678		1
(Class XX, Inter. 185A)		1		1								138	F
Dislocation, shoulder, "J" (Class XX, Inter. 185A)		22	7	22			2		5	nois	275		F
Dislocation, shoulder, "L"	1	25	19	28					75320				Fo
Dislocation, unqualified, "F"	1	20				******	4		11	2	625		For
Dislocation, unqualified, "G"			1	1							21		46
Dislocation, unqualified, "I"		7	2	6		• • • • • •			2	1	194		Fore
(Class XX, Inter. 185A)		1	2	1					2		32		Forei
(Class XX, Inter, 185A)		4	3	4					3		208		"Oreig
(Class XX, Inter. 185A)		6	7	- 8			Date	TE VE	5		144		Oreign
(Class XX, Inter. 185A)		6	4	5			9	TOWN	1	2	109		Foreign
Dislocation, vertebra, "J" (Class XX Inter 1854)		2	2			4	To all the	790	(A)	2		1	Foreign (
Dislocation, vertebra, "L"				1	2	1					30		Foreign (
Dislocation, vertebra, "L" (Class XX, Inter. 185A). Dislocation, wrist, "G" (Class	- 1	4	2	4			3				139		arm, "
XX, Inter. 185A). Dislocation, wrist, "H" (Class XX, Inter. 185A).		4	3	6					1		218		Foreign
XX, Inter. 185A). Dislocation, wrist, "I" (Class		3	3		1		1	00(0)	.4		143	H	Oreign b
XX, Inter. 185A)		1		1			2000				19	1	oreign boarm, "L
XX, Inter. 185A)		1		-			1	164	1	1001	Part so	Fo	arm, "L" 186) Preign bod G" (Class reign body L" (Class eign body
Dislocation, Wrist, "J" (Class XX, Inter. 185A). Dislocation, Wrist, "L" (Class XX, Inter. 185A). Drowning, "A" (Class XX, Inter. 1602)	1772	6	3	5			4		10.0X		000	For	reign body
Drowning, "A" (Class XX,			9	9			1	•••••	3		203	For	eign hod
Inter. 1693) Drowning, "D" (Class XX, Inter. 1693).		6				6		•••••				Fore	ign Class
Inter. 1693)		116	11			116]		"L	Life (Class eign body (Class ign body, (Class X
													11

TABLE 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917—Continued.

	Tal	cen up	as—			D	isposit	ion.			days
Diagnoses.	Remaining from last year.	Admitted.	Readmitted.	Duty.	Diagnosis changed.	Died.	Invalided from service.	Ran.	Transferred.	Continued to next year.	Number of sick of this year.
INJURIES—Continued.											-
Drowning, "DR" (Class XX,											
Drowning, "DR" (Class XX, Inter. 1693) Drowning, "DS" (Class XX, Inter. 1693).		4				4					
Drowning "K" (Clase YY		19				19			• • • • • • • • • • • • • • • • • • • •		
Electric shock, "F" (Class XX		, 48			• • • • • • • • • • • • • • • • • • • •	48				,	
Electric shock, "H" (Class XX.			1	1							(
Inter. 181) Electric shock, "L" (Class XX,		1		1							1
Inter. 181). Epiphyseal separation femur, "L" (Class XX, Inter. 185C).		5	1	. 5					1		28
"L" (Class XX, Inter. 185C) Epiphyseal separation tibia,		1							-1		2
Epiphyseal separation tibia, "G" (Class XX, Inter. 185C). Exhaustion from heat, "C"		1			1						1
(Class XX, Inter. 179A)		1	1	1					1		1 8
Exhaustion from fleat, "J"		3	1	3					1		32
(Class XX, Inter. 179A). Exhaustion from heat, "K" (Class XX, Inter. 179A). Exhaustion from heat, "L" (Class XX, Inter. 179A). Exhaustion from overexertion, "J" (Class XX, Inter. 177A). Exhaustion from overexertion, "L" (Class XX, Inter. 177A). Exhaustion from overexertion, "L" (Class XX, Inter. 177A). Exhaustion from overexposure.		1		1							8
Exhaustion from heat, "L" (Class XX, Inter, 179A)		157	17	158	2	1			12	1	
Exhaustion from overexertion,			11	100	-	1			12	1	
Exhaustion from overexertion,		1									29
Exhaustion from overexposure,		20	4						4		193
Exhaustion from overexposure, "K" (Class XX, Inter. 177A). Exhaustion from overexposure, "L" (Class XX, Inter. 177A).		36	10	9		25			10	2	103
"L" (Class XX, Inter. 177A) Foreign body, traumatic, arm.		20	4	14	1	5			2	2	65
Foreign body, traumatic, arm, "L" (Class XX, Inter. 186) Foreign body, traumatic, arm,		2	4	3					2	1	39
Foreign body, traumatic, ear, "L" (Class XX, Inter. 186)		1		1							3
Foreign body, traumatic, eye, "E" (Class XX, Inter. 186)		1	1				1		1		36
Foreign body, traumatic, eye, "H" (Class XX, Inter. 186) Foreign body, traumatic, eye, "L" (Class XX, Inter. 186) Foreign body, traumatic, eye, "L" (Class XX, Inter. 186)		8	. 2	8					1	1	165
Foreign body, traumatic, eye, "L" (Class XX, Inter, 186)		56	13	55	1		2		11		433
Foreign body, traumatic, face, "E" (Class XX, Inter. 186)		00	1	• 1					11		7
Foreign body, traumatic, face, "H" (Class XX, Inter. 186)		1	1	,							
Foreign body, traumatic, finger, "L" (Class XX, Inter. 186)		1	•••••	1	•••••						3
Foreign body, traumatic, foot, "E" (Class XX, Inter. 186)		1	1	1					. 1		11
"E" (Class XX, Inter. 186) Foreign body, traumatic, foot,	:.	1	1	1	• • • • • • •	• • • • • •			1		14
Foreign body, traumatic, foot, "L" (Class XX, Inter. 186) Foreign body, traumatic, fore- arm, "E" (Class XX, Inter.	• • • • • •	5		5							46
arm, "E" (Class XX, Inter.		. 2	2	9					0		. 10
Foreign body, traumatic, forearm, "J" (Class XX, Inter. 186)	•••••		2	2					2		19
Foreign body, traumatic, forearm, "L" (Class XX, Inter. 186)	•••••	1			•••••	•••••			1		
100)		1							1		
Foreign body, traumatic, hand, "G" (Class XX, Inter. 186)		1		1							4
"L" (Class XX, Inter. 186)		3	1	2					2		4
Foreign body, traumatic, hand, "L" (Class XX, Inter. 186) Foreign body, traumatic, knee, "E" (Class XX, Inter. 186) Foreign body, traumatic, knee,			. 1	1							21
Foreign body, traumatic, knee, "L" (Class XX, Inter. 186)		1	3			22			1	2	46

Table 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917—Continued.

Diagnoses.	Remaining from last year.				ed.		Ħ		1	+2	k days
INJURIES—Continued.	Rem	Admitted.	Readmitted.	Duty.	Diagnosis changed	Died.	Invalided from service.	Ran.	Transferred.	Continued to next	Number of sick this year.
INJURIES—Continued.											
Foreign body, traumatic, larynx,	1				86.0						
Foreign body, traumatic, leg, "F" (Class XX, Inter. 186)			1 1	1					- 1		-
Foreign body, traumatic, leg, "L" (Class XX, Inter. 186)			1		1				. 1		. 1
Foreign body, traumatic, maxilla, "E" (Class XX, Inter. 186)			2 1	2					. 1		. 2
illa, "E" (Class XX, Inter. 186) Foreign body, traumatic, mul-)		·····						. 1		
Foreign body, traumatic, multiple, "F" (Class XX, Inter. 186).							1		,		
Foreign body, traumatic, pelvis, "E" (Class XX, Inter. 186).				1							
Foreign body, traumatic, scapula, "E" (Class XX, Inter. 186)]							1		
			1	1							İ
Foreign body, traumatic, toe, "L" (Class XX, Inter. 186).		1		1							. 13
Foreign body, traumatic, unqualified, "E" (Class XX,		1		1	:						
Inter 186).	. 1		1	1					1		111
Foreign dody, traumatic, unqualified, "G" (Class XX,									1		11.
		1							1		
Foreign body, traumatic, un- qualified, "L" (Class XX, Inter. 186).	1	17	10	0.1	10						
Foreign body, traumatic, wrist, "H" (Class XX, Inter. 186)	1	17	12	21	1	•••••			8		366
tractiffe about ankle compound		1	1	1					1 .		3
"H" (Class XX, Inter. 185C) Fracture about ankle, compound,			2	1					1.		47
Fracture about ankle compound		1	1	2							46
"L" (Class XX, Inter. 185C). Fracture about ankle, simple,	1						1				153
'A' (Class A.A. Inter, 185C)			1	1.							51
Fracture about ankle, simple, "F" (Class XX, Inter. 185C).			1.		1						
"G" (Class XX Inter 1850)	3	24	21	23	2						1
racture about ankle, simple, "I" (Class XX, Inter. 185C).					4.		2		16	5	1,250
racture apout apice simple	1	3	2	4.			•••••		2.		220
"J" (Class XX, Inter. 185C) racture about ankle, simple,	1	6	4	7.					3	1	334
racture about elbow compound	3	17	8	15	1.		3		8	1	523
racture about elbow simple		1	2						2	1	27
"G" (Class XX, Inter. 185C) racture about elbow, simple,		5	8	4.			1		4	4	395
"H" [13999 X X Inter 1050]		2	. 1		1		1		1		
"J" (Class XX. Inter 185C)		1	1				1				31
"L" (Class XX. Inter 1850)		3	1					•••••	1	1	2
racture about wrist compound			1	2		• • • • •	1.	•••••	1		111
"H" (Class XX, Inter. 185C)		1	1		1	• • • • • •			1		46
racture about wrist simple		1.	••••	1							33
racture about wrist simple		1	1				1.		1		32
racture about wrist simple	2	33	17	32	2		1.		14	3	1,131
		5	1	4							
racture about wrist, simple, "I" (Class XX, Inter. 185C)	1	. 4	5	6					3	1	295 254

Fr.

Fracture, hr.

(Class XX.)

TABLE 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917—Continued.

	Та	ken ur	as-		se gr		Dispo	sition.			days	
Diagnoses.	Remaining from last year.	Admitted.	Readmitted.	Duty.	Diagnosis changed.	Diad	Invalided from	Service.	Transferred.	Continued to next	f sick year.	
INJURIES—Continued.										0 100		
Fracture about wrist, simple, "J" (Class XX, Inter. 185C) Fracture about wrist, simple, "L" (Class XX, Inter. 185C) Fracture, clavicle, compound, "G" (Class XX, Inter. 185C) Fracture, clavicle, compound, "H" (Class XX).	1	13	5	1	3	1		1		1 7 1	- 139 - 272	
"J" (Class XX, Inter. 185C). Fracture, clavicle, compound, "L" (Class XX, Inter. 185C). Fracture, clavicle, simple, (Class XX, Inter. 185C). Fracture, clavicle, simple, (Class XX, Inter. 185C).		1 1 1			1			1		1	. 25	
(Class XX, Inter. 185C) Fracture, clavicle, simple, "I" (Class XX, Inter. 185C)	4	33 2	21	2	9	3		1	2	3	2 1,154	
Fracture, clavicle, simple, "J" (Class XX, Inter. 185C). Fracture, clavicle, simple, "L" (Class XX, Inter. 185C). Fracture, facial, simple, "G" (Class XX, Inter. 185C).	1	14 15	9	1	5	4		1	. 19		1	
(Class XX, Inter. 1850). Fracture, facial, simple, "GR" (Class XX, Inter. 1850). Fracture, facial, simple, "J" (Class XX, Inter. 1850). Fracture, facial, simple, "L" (Class XX, Inter. 1850). Fracture, facial, simple, "L" (Fracture, facial, simple, "L" (Fracture, facial, simple, "L")		3	1	1					. 1		33 10	
(Class XX, Inter, 185C)	1	9	11	8			-		8		32 332	
Fracture, femur, compound, "I" (Class XX, Inter. 185C). Fracture, femur, simple, "G" (Class XX, Inter. 185C). Fracture, femur, simple, "H"	1	12	1 .	6	2				20	1 7	55 31 1,609	
(Class XX, Inter. 185C)	1	1.4	3	1					7	1	69 190	
(Class XX, Inter. 185C). Fracture, fibula, compound, "H" (Class XX, Inter. 185C). Fracture, fibula, compound, "L" (Class XX Inter. 185C).		6	8	1					5	6	1,513 32	
Fracture, fibula, simple, "F" (Class XX, Inter. 185C). Fracture, fibula, simple, "G" (Class XX, Inter. 185C).		38	1	20	5	•••••	1		1.	1	182	
racture, fibula, simple, "GR" (Class XX, Inter. 185C). Fracture, fibula, simple, "I" (Class XX, Inter. 185C). Fracture, fibula, simple, "I"		1	4	3	1				30	13	1,526	
(Class XX, Inter. 185C). Fracture, fibula, compound, "L" (Class XX, Inter. 185C). Fracture, fibula, compound, "H" (Class XX, Inter. 185C). Fracture, fibula, compound, "L" (Class XX, Inter. 185C). Fracture, fibula, simple, "F" (Class XX, Inter. 185C). Fracture, fibula, simple, "G" (Class XX, Inter. 185C). Fracture, fibula, simple, "GR" (Class XX, Inter. 185C). Fracture, fibula, simple, "GR" (Class XX, Inter. 185C). Fracture, fibula, simple, "I" (Class XX, Inter. 185C). Fracture, fibula, simple, "J" (Class XX, Inter. 185C). Fracture, fibula, simple, "K" (Class XX, Inter. 185C). Fracture, fibula, simple, "L" (Class XX, Inter. 185C).		15	10	10	3				8	4	712 63	
(Class XX, Inter. 185C). Fracture, humerus, compound, "G" (Class XX, Inter. 185C). Fracture, humerus, compound, "H" (Class XX, Inter. 185C).		18	7 3	12	1				6 2	6 2	660 389	
"I" (Class XX, Inter. 185C) "Fracture, humerus, simple, "G" (Class XX, Inter. 185C)	1	1 26	2	2.	2.				2		275	
Fracture, humerus, simple, "H" (Class XX, Inter. 185C)		2		1				3	13	7	876	

Table 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917—Continued.

Diagnoses.		T			1							T	
Diagnoses.		Tak	ten up	as—			D	isposit	ion.			days	
INJURIES Continued. Fracture, humorus, simple, "I" (Class XX, Inter. ISSO). 2	Diagnoses.	maining from last year.	Imitted.	admitted.	ıty.	agnosis changed.	ed.	valided from service.	n.	ansferred.	atinued to next	1	
INJURIES—Continued.		Re	Ac	Re	Dr	Di	ij	In	Ra	Tr	Col	Nu	
Fracture, numerus, simple, "1" 5 9 6 1 4 3 472	INJURIES—Continued.			,									
Class XX, Inter, ISSO	Fracture, humerus, simple, "I"			1									
Class XX, Inter. ISSO.	Fracture, humerus, simple, "J"							·····		2			
Fracture, mass XX, Inter, 1850,	(Class XX, Inter. 1850) Fracture, humerus, simple, "L"					1				4	3	472	
"" (Class XX, Inter, ISSC) 1 1 1 1 1 1 1 1 1	(Class XX, Inter. 185C)				1					1		15	
Class XX, Inter, 1850 1	"G" (Class XX, Inter. 185C) Fracture. maxilla, compound,	. 1	2	1	2	1				1		62	
Class XX, Inter, 1850 1	"I" (Class XX, Inter. 185C) Fracture, maxilla, compound.		1	1	·····	1				1		19	
Class XX, Inter, 1850 1	"J" (Class XX, Inter. 185C)		3	J	2					. 1	l!		
Class XX, Inter, 1850 1	"L" (Class XX, Inter. 185C)	1	12	14	14	· · · · · · ·		. 1		9	3	857	
(Class XX, Inter. 185C). Fracture, maxilla, simple, "L" (Class XX, Inter. 185C). (Class XX, In	(Class XX, Inter. 185C)		. 1	1	1					. 1			
(Class XX, Inter. 185C). Fracture, maxilla, simple, "L" (Class XX, Inter. 185C). (Class XX, In	Class XX, Inter. 185C)		. 4	6	2	3	!			5			
(Class XX, Inter. 185C). 4 31 23 27 2 23 6 1,340 Fracture, metacarpal, compound, (E.") (Class XX, Inter. 185C). 1 1 1 23 Fracture, metacarpal, compound, (H") (Class XX, Inter. 185C). 2 1 2 1 1 23 Fracture, metacarpal, compound, (H") (Class XX, Inter. 185C). 2 1 1 1 1 9 Fracture, metacarpal, compound, (Class XX, Inter. 185C). 2 2 2 2 2 1 1 1 166 Fracture, metacarpal, compound, (Class XX, Inter. 185C). 2 2 2 2 2 1 1 1 166 Fracture, metacarpal, simple, (H") (Class XX, Inter. 185C). 2 2 1 1 1 166 Fracture, metacarpal, simple, (H") (Class XX, Inter. 185C). 2 2 1 1 1 166 Fracture, metacarpal, simple, (H") (Class XX, Inter. 185C). 3 7 8 34 1 9 1 608 Fracture, metacarpal, simple, (H") (Class XX, Inter. 185C). 3 7 8 34 1 9 1 608 Fracture, metacarpal, simple, (H") (Class XX, Inter. 185C). 3 7 8 34 1 9 1 608 Fracture, metacarpal, simple, (H") (Class XX, Inter. 185C). 3 7 8 34 1 9 1 608 Fracture, metacarpal, simple, (H") (Class XX, Inter. 185C). 3 7 8 3 4 1 9 1 608 Fracture, metacarpal, simple, (H") (Class XX, Inter. 185C). 3 9 11 3 1 112 Fracture, metacarpal, simple, (H") (Class XX, Inter. 185C). 3 9 11 3 1 1 6 6 2 370 Fracture, metacarpal, simple, (H") (Class XX, Inter. 185C). 3 9 11 3 1 1 1 4 44 Fracture, metacarpal, simple, (H") (Class XX, Inter. 185C). 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Fracture, maxilla, simple, "1" (Class XX, Inter. 185C)		3										
(Class XX, Inter. 185C). 4 31 23 27 2 23 6 1,340 Fracture, metacarpal, compound, (E.") (Class XX, Inter. 185C). 1 1 1 23 Fracture, metacarpal, compound, (H") (Class XX, Inter. 185C). 2 1 2 1 1 23 Fracture, metacarpal, compound, (H") (Class XX, Inter. 185C). 2 1 1 1 1 9 Fracture, metacarpal, compound, (Class XX, Inter. 185C). 2 2 2 2 2 1 1 1 166 Fracture, metacarpal, compound, (Class XX, Inter. 185C). 2 2 2 2 2 1 1 1 166 Fracture, metacarpal, simple, (H") (Class XX, Inter. 185C). 2 2 1 1 1 166 Fracture, metacarpal, simple, (H") (Class XX, Inter. 185C). 2 2 1 1 1 166 Fracture, metacarpal, simple, (H") (Class XX, Inter. 185C). 3 7 8 34 1 9 1 608 Fracture, metacarpal, simple, (H") (Class XX, Inter. 185C). 3 7 8 34 1 9 1 608 Fracture, metacarpal, simple, (H") (Class XX, Inter. 185C). 3 7 8 34 1 9 1 608 Fracture, metacarpal, simple, (H") (Class XX, Inter. 185C). 3 7 8 34 1 9 1 608 Fracture, metacarpal, simple, (H") (Class XX, Inter. 185C). 3 7 8 3 4 1 9 1 608 Fracture, metacarpal, simple, (H") (Class XX, Inter. 185C). 3 9 11 3 1 112 Fracture, metacarpal, simple, (H") (Class XX, Inter. 185C). 3 9 11 3 1 1 6 6 2 370 Fracture, metacarpal, simple, (H") (Class XX, Inter. 185C). 3 9 11 3 1 1 1 4 44 Fracture, metacarpal, simple, (H") (Class XX, Inter. 185C). 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Fracture, maxilla, simple, "J" (Class XX. Inter. 1850).												
Practure, metacarpal, simple, "I' (Class XX, Inter, ISSC). 1 1 1 1 2 2 1 2 2 1 2 3 4 4 4 4 4 4 4 4 4	Fracture, maxilla, simple, "L"	4								99			
Practure, metacarpal, simple, "I' (Class XX, Inter, ISSC). 1 1 1 1 2 2 1 2 2 1 2 3 4 4 4 4 4 4 4 4 4	Fracture, metacarpal, compound,	*					•••••			25	О		
### Class XX, Inter. 185C).	Fracture, metacarpal, compound,	•••••											
"1" (Class XX, Inter. 185C).	Fracture, metacarpar, compound.		2	1	2					1		23	
Tracture, metacarpal, compound, "L" (Class XX, Inter. 185C).	"I" (Class XX, Inter, 185C)		1	1						1	1	9	
"L" (Class XX, Inter. 185C). 2 2 2 1 1 1 166 Fracture, metacarpal, simple, "E" (Class XX, Inter. 185C). 2 1 1 1 35 Fracture, metacarpal, simple, "F" (Class XX, Inter. 185C). 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	(Class XX, Inter. 185C)		2							2			
Tracture, metacarpal, simple,			2	2	2		l			1	1	166	
"F" (Class XX, Inter, 185C). 1 1 1 1 1 9 1 608 Fracture, metacarpal, simple, "H" (Class XX, Inter, 185C). 5 3 2 1 1 3 1 112 Fracture, metacarpal, simple, "H" (Class XX, Inter, 185C). 5 3 2 1 1 3 1 112 Fracture, metacarpal, simple, "I" (Class XX, Inter, 185C). 5 3 2 1 1 3 1 112 Fracture, metacarpal, simple, "I" (Class XX, Inter, 185C). 7 5 13 1 6 2 370 Fracture, metacarpal, simple, "I" (Class XX, Inter, 185C). 90 30 87 2 11 4 844 Fracture, metacarpal, simple, "L" (Class XX, Inter, 185C). 90 30 87 2 19 12 2,006 Fracture, metacarsal, compound, "I" (Class XX, Inter, 185C). 1 1 1 44 Fracture, metatarsal, compound, "L" (Class XX, Inter, 185C). 1 1 1 44 Fracture, metatarsal, simple, "L" (Class XX, Inter, 185C). 1 1 1 46 Fracture, metatarsal, simple, "H" (Class XX, Inter, 185C). 1 1 1 46 Fracture, metatarsal, simple, "I" (Class XX, Inter, 185C). 7 15 9 2 2 6 3 552 Fracture, metatarsal, simple, "H" (Class XX, Inter, 185C). 7 15 9 2 2 6 3 552 Fracture, metatarsal, simple, "H" (Class XX, Inter, 185C). 7 15 9 2 2 6 3 552 Fracture, metatarsal, simple, "H" (Class XX, Inter, 185C). 7 15 9 2 2 6 3 552 Fracture, metatarsal, simple, "H" (Class XX, Inter, 185C). 7 15 9 2 2 6 3 552 Fracture, metatarsal, simple, "H" (Class XX, Inter, 185C). 7 15 9 2 2 6 5 3 552 Fracture, metatarsal, simple, "H" (Class XX, Inter, 185C). 7 15 9 2 2 6 5 3 552 Fracture, metatarsal, simple, "H" (Class XX, Inter, 185C). 7 15 9 2 2 6 5 3 552 Fracture, metatarsal, simple, "H" (Class XX, Inter, 185C). 7 15 9 2 2 6 5 3 552 Fracture, metatarsal, simple, "H" (Class XX, Inter, 185C). 7 15 9 2 2 5 6 3 552 Fracture, metatarsal, simple, "H" (Class XX, Inter, 185C). 7 15 9 2 2 5 6 3 552 Fracture, metatarsal, simple, "H" (Class XX, Inter, 185C). 7 15 9 2 2 5 6 3 552 Fracture, metatarsal, simple, "H" (Class XX, Inter, 185C). 7 15 9 2 2 5 6 3 552 Fracture, metatarsal, simple, "H" (Class XX, Inter, 185C). 7 15 9 2 2 5 6 3 552 Fracture, metatarsal, simple, "H" (Class XX, Inter, 185C). 7 15 9 2 2 5 6 3 552 Fracture, metatarsal, simple, "H" (Clas	"E" (Class XX, Inter 185C)		2]	1								
Tracture, metacarpal, simple,	"F" (Class XX, Inter. 185C)		1	1	1					1			
Fracture, metacarpal, simple, "H"(Class XX, Inter. 185C). 5 3 2 1 1 3 1 112	"G" (Class XX, Inter, 185C)			- 1	34	1					1	608	
Fracture Metacarpal, simple	Fracture, metacarpal, simple,							1					
Fracture, metacarpal, simple,	Fracture, metacarpal, simple.							1					
"L" (Class XX, Inter. 185C). 90 30 87 2 19 12 2,006 Fracture, metatarsal, compound, "I" (Class XX, Inter. 185C). 1 1 1	Fracture, metacarpal, simple,	•••••											
"I" (Class XX, Inter. 185C).	Fracture, metacarpal, simple,									11	4	844	1
"1" (Class XX, Inter. 185C).		•••••	90	30	87	2				19	12	2,006	1
"L" (Class XX, Inter. 185C).	"I" (Class XX, Inter, 185C)	•••••		1	1							44	I
"G" (Class XX, Inter, 185C). 7 15 9 2 2 6 3 552 Fracture, metatarsal, simple, "H" (Class XX, Inter, 185C). 3 1 1 1 1 46 Fracture, metatarsal, simple, "GLass XX, Inter, 185C). 7 6 6 1 5 1 214 Fracture, metatarsal, simple, "J" (Class XX, Inter, 185C). 7 6 6 1 5 1 214 Fracture, metatarsal, simple, "J" (Class XX, Inter, 185C). 7 6 6 1 5 1 214 Fracture, metatarsal, simple, "L" (Class XX, Inter, 185C). 1 1 1 2 12 5 774 Fracture, multiple, compound, "Fracture, multiple, compound, "G" (Class XX, Inter, 185C). 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Fracture metatoreal cimple !		1		1							16	1
Fracture	"G" (Class XX, Inter, 185C)		7	15	9	2		2		6	3	552	10)
Fracture, metatarsal, simple, "1" (Class XX, Inter, 185C).	"H" (Class X X Inter 1850)		3		1	i		. 1					Fre
### Fracture, multiple, compound, "G" (Class XX, Inter. 185C). 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	(Class XX, Inter 185C)		14	6				1			3		p It
"L" (Class XX, Inter. 185C). 24 11 15 1 2 12 5 774 Fracture, multiple, compound, "Fracture, multiple, compound, "G" (Class XX, Inter. 185C). 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	"J" (Class XX, Inter. 185C)				350							- 4	- Fra
"F" (Class XX, Inter. 185C). 1 1 7 "Fracture, multiple, compound, "G" (Class XX, Inter. 185C). 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Fracture, metatarsal, simple,											1	Frac
"G" (Class XX, Inter. 185C). 1 1 1 1 1 169 Fracture, multiple, compound,	Fracture, multiple, compound,		24		10	1		2		12	b	1	rrac
"G" (Class XX, Inter. 185C) 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Fracture, multiple, compound,			1						1	•••••	7	Frant
"I' (Class XX, Inter. 185C)	"G" (Class XX, Inter. 185C) Fracture, multiple, compound,	1		1				1		1		162	
	"I" (Class XX, Inter. 185C)			1						1			"J"

TABLE 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917—Continued.

	Tak	en up	as—			Di	isposit	ion.			days
Diagnoses.	from				nanged.		from .			next	
	Remaining f last year.	Admitted.	Readmitted.	Duty.	Diagnosis changed	Died.	Invalided service.	Ran.	Transferred.	Continued to next year.	Number of sick this year.
INJURIES—Continued.											
Fracture, multiple, simple, "F" (Class XX, Inter. 185C) Fracture, multiple, simple, "G"	·····		1	1		·					77
(Class XX, Inter. 185C)		1	4	3	1					1	69
Fracture, multiple, simple, "H" (Class XX, Inter. 185C).			1							1	180
Fracture, multiple, simple, "I" (Class XX, Inter. 1850)		1		1							13
Fracture, multiple, simple, "L" (Class XX, Inter. 185C)		1								1	2
Fracture, nasal, compound, "G" (Class XX, Inter. 185C)		1	1	1					1		11
Fracture, nasal, compound, "H" (Class XX, Inter. 185C)		1		1							8
Fracture, nasal, compound, "J" (Class XX, Inter. 185C)		2		. 2							1
Fracture, nasal, compound, "L" (Class XX, Inter. 185C)		6	6	8					4		. 96
Fracture, nasal, simple, "B" (Class XX, Inter. 185C)			1	1							7
Class XX. Inter. 185C)		13	3	11	1				3	1	90
Fracture, nasal, simple, "GR" (Class XX, Inter. 185C)		2		2							24
(Class XX, Inter, 185C)		2	1	2					1		. 8
Class XX, Inter. 185C)		11	11	. 14					7	1	118
(Class XX, Inter, 185C)		37	12	37					11	1	169
(Class XX. Inter 185C)	1	11	6	5	2				8	3	316
Fracture, patella, simple, "J" (Class XX, Inter. 185C).	-	4	1	3	Ĩ		1		1	, ,	102
Fracture, patella, simple, "D" (Class XX, Inter. 1850)	1	6	3	4			3		2	1	206
Fracture, pelvis, compound, "G" (Class XX, Inter. 185C)	1	2	o	. 1		1	0			1	200
Fracture, pelvis, simple, "G" (Class XX, Inter. 185C)	1	1	5			1			1		
Fracture, pelvis, simple, "H"	1		b	1	2				2	2	283
(Class XX, Inter. 185C) Fracture, pelvis, simple, "I" (Class XX, Inter. 185C)		1		1							35
(Class XX, Inter. 1850) Fracture, pelvis, simple, "D" (Class XX, Inter. 1850)		1								1	110
Fracture, phalanges, foot, compound, "G" (Class XX, Inter.		4	1	1			1		2	1	-111
185C)		1							1		
Fracture, phalanges, foot, compound, "H" (Class XX, Inter.											
185C)		3	4	2	1				4		91
Fracture, phalanges, foot, compound, "I" (Class XX, Inter. 185C)	,	3	1	2					1	1	76
Fracture, phalanges, foot, compound, "L" (Class XX, Inter.									1	. 1	
Fracture, phalanges, foot, simple,		1		1							20
"E" (Class XX, Inter. 185C) Fracture, phalanges, foot, simple,	,	1		1							7
"G" (Class XX, Inter. 185C) Fracture, phalanges, foot, simple,		5		2					2	1	18
"H" (Class XX, Inter. 185C) Fracture, phalanges, foot, simple,		5	1	4					2		101
"I" (Class XX, Inter. 185C) Fracture, phalanges, foot, simple,		25			-			~ 7	6	2	548
"J" (Class XX, Inter. 185C)	•••••	3	1	. 3	l	l	l		1		72

Table 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917—Continued.

	Tak	en up	as—			Di	isposit	ion.		-	days
Diagnoses.	Remaining from last year.	Admitted.	Readmitted.	Duty.	Diagnosischanged.	Died.	Invalided from service.	Ran.	Transferred.	Continued to next	Number of sick this year.
INJURIES—Continued.											
Fracture, phalanges, foot, simple, "L" (Class XX, Inter. 185C) Fracture, phalanges, hand, compound, "E" (Class XX, Inter.		28	11	25	. 1				9.	4	798
Fracture, phalanges, hand, compound, "G" (Class XX, Inter.			1	3							86
185C). Fracture, phalanges, hand, compound, "H" (Class XX, Inter.		3	1	3					.1	•••••	80
Fracture, phalanges, hand, compound, "I" (Class XX, Inter.		8	4	11					1		255
185C). Fracture, phalanges, hand, compound, "J" (Class XX, Inter.		20	4	13			1		7	3	244
185C). Fracture, phalanges, hand, compound, "L" (Class XX, Inter.		2	1	2	1						13
185C). Fracture, phalanges, hand, simple, "E" (Class XX, Inter. 185C)		2	2	2					1	1	93 [80] 39
Fracture, phalanges, hand, simple, "G" (Class XX, Inter. 1850) Fracture, phalanges, hand, simple,	ļ	14	8		2				4	2	320
"H" (Class XX, Inter. 1850) Fracture, phalanges, hand, simple, "I" (Class XX, Inter. 1850)		11 41	3	35	1				7	1	429 757
Fracture, phalanges, hand, simple, "J" (Class XX, Inter. 185C) Fracture, phalanges, hand, simple, "L" (Class XX, Inter. 185C)		28	5	29			ļ		4		380
Fracture, radius, compound, "G"		. 45 1	14	45	3				9 2	2	821 120
Fracture, radius, compound, "L" (Class XX, Inter. 1850) Fracture, radius, simple, "G" (Class XX, Inter. 1850)			1				,			1	56
(Class XX, Inter. 185C)		67	. 8	52 10	4		2		38	10	1,720 374
		1	3	1					3		95
Fracture, radius, simple, "J" (Class XX, Inter. 1850) Fracture, radius, simple, "K" (Class XX, Inter. 1850)		16	7	12	2				7	2	315 28
Fracture, radius, simple, "L" (Class XX, Inter. 1850) Fracture, radius and ulna, compound, "F" (Class XX, Inter.		28	13	18	2				12	9	779
pound, "F" (Class XX, Inter. 1850). Fracture, radius and ulna, compound, "G" (Class XX, Inter. 1870).	. 1						1				331
Fracture, radius and ulna, compound, "L" (Class XX, Inter.		2	2		1		1		2		19
Fracture, radius and ulna, simple, "F" (Class XX, Inter: 185C)		1		1			1		•••••		23
"G" (Class XX, Inter, 185C)	6	15	12	16			- 1		15	1	1,261
Fracture, radius and ulna, simple, "H" (Class XX, Inter. 1850) Fracture, radius and ulna, simple, "I" (Class XX, Inter. 1850)	1 1	7	4	6	•••••		2	1	2	1	322
Fracture, radius and ulna, sim- ple, "J" (Class XX, Inter. 185C). Fracture, radius and ulna, simple,		4	4	4					3	1	127 215
"L" (Class XX, Inter. 185C)	3	10	18	10	5		1		13	2	1,115

Fr.

Fra.

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185C)

TABLE 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917—Continued.

	Taken up as—					D	isposit	tion.			days
	from .				Diagnosis changed.	-	from			Continued to next year.	Number of sick d
Diagnoses.	ar.		d.		haı					10 n	f s
	Remaining last year.	ed.	Readmitted		sis		Invalided service.		Transferred.	ued i	ohis
	air	iitt	ш		nos		lide		sfer	nu	ber
	em	Admitted	eac	Duty.	iag	Died.	IVa	Ran.	an.	nti	H
	띰	4	낊	Ω.	D	A.	크	R	T	ပိ	Z
INJURIES—Continued.											
Fracture, rib, compound, "G"								1			
Fracture, rib, compound, "G" (Class XX, Inter. 185C) Fracture, rib, simple, "E"		1				1					
		1		1							18
(Class XX, Inter. 1850). Fracture, rib, simple, "G" (Class XX, Inter. 1850). Fracture, rib, simple, "GR"		53	10	48							
Fracture, rib, simple, "GR" (Class XX, Inter 185C)		- 00	13	48	3				11	4	664
(Class A.A., Inter. 185C)		1		1							32
XX, Inter. 185C)		2		2							30
Fracture, rib, simple, "J" (Class XX, Inter. 185C)		21	11	22	1						1
Fracture, rib, simple, "L" (Class XX, Inter. 185C) Fracture, scapula, simple, "G"			İ		1	*****					317
Fracture, scapula, simple, "G"	• • • • • • • • • • • • • • • • • • • •	16	6	15	2						218
Fracture, scapula, simple, "G" (Class XX, Inter. 185C)		4	4	1	2		1		. 3	1	79
Fracture, scapula, simple, "J" (Class XX, Inter. 185C)		2	1	1	1						
Fracture, scapula, simple, "L" Class XX, Intr. 186C)				1	1				. 1		14
Fracture, skull, compound, "B"	•••••	3	1		• • • • • • • • • • • • • • • • • • • •		1	• • • • • • •	. 3		45
Fracture, skull, compound, "B" (Class XX, Inter. 185C).		1				1					23
Fracture, skull, compound, "F" (Class XX, Inter. 185C)		2	7			2					1
rracture.skiiii.compoind.**(+?)		7			•••••						
(Class XX, Inter. 185C) Fracture, skull, compound		9	12	1	1	. 5	2		10	2	324
Fracture, skull, compound "GR"(Class XX, Inter. 185C). Fracture, skull, compound, "H". (Class XX, Inter. 185C). Fracture, skull, compound		1				1					
(Class XX, Inter. 185C)		2				9					
Fracture, skull, compound, "HR" (Class XX, Inter. 185C).						_					
Fracture, skull, compound, "I" (Class XX, Inter. 185C)	•••••	1	•••••	• • • • • • • • • • • • • • • • • • • •	•••••	1				•	
(Class XX, Inter. 185C)	• • • • • • • • • • • • • • • • • • • •	6	• • • • • • • • • • • • • • • • • • • •	1		4			1		1
Fracture, skull, compound, "L" (Class XX, Inter. 185C)	2	9	11	6	1	4	1		8	2	316
Fracture, skull, simple, "B" (Class XX, Inter. 185C)		2					-			-	
Fracture, skull, simple, "F" (Class XX, Inter. 185C)		2	•••••	•••••	•••••	1	•••••	•••••	1	•••••	1
(Class XX, Inter. 185C) Fracture, skull, simple, "G"		1	•••••		•••••					. 1	1
(Class XX, Inter, 185C)		32	17	11	4	9		1	17	7	494
Fracture, skull, simple, "H" (Class XX, Inter. 185C)		3		1			,				
Fracture, skull, simple "T"					•••••		1	•••••	1	•••••	113
(Class XX, Inter. 185C) Fracture, skull, simple, "J"	•••••	.3	5	1	2	1			4	•••••	73
(Class XX Inter 185C)		2	1		1				2		. 3
Fracture, skull, simple, "L" (Class XX, Inter. 185C).	2	23	22	17	3	7	1		15	4	677
Fracture, tibia, compound, "I" (Class XX, Inter. 185C)			2/2	11	9		1		10	4	077
Fracture, tibia, compound, "L"	• • • • • •	1	•••••	•••••	• • • • • • • • • • • • • • • • • • • •	•••••	•••••	• • • • • • • • • • • • • • • • • • • •	1	•••••	
Fracture, tibia, compound, "L" (Class XX, Inter. 185C) Fracture, tibia, simple, "G"		2	2		1				1	2	48
		17	11	7	2				12	7	547
(Class XX Inter 1850)			1		-						
Fracture, tibia, simple, "I"		1	3	• • • • • • • • • • • • • • • • • • • •				•••••	2	2	60
Fracture, tibia, simple, "I" (Class XX, Inter. 185C) Fracture, tibia, simple, "J"		2	4	1	1				2	2	153
(Class XX, Inter, 185C)		10	7	5	2				7	3	396
Fracture, tibia, simple, "L" (Class XX, Inter, 185C).		21	19	14	0						
Fracture, tibia and fibula, compound, "E" (Class XX, Inter.		21	19	19	- 2		1	• • • • • • • • • • • • • • • • • • • •	17	6	1,175
DOUBLE, "E" (Class X X Infer		- 1	1		- 1	- 1				8	

TABLE 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917—Continued.

	Tal	ken up	as—			4 D	isposit	ion.			days
Diagnoses.	Remaining from last year.	Admitted.	Readmitted.	Duty.	Diagnosis changed.	Died.	Invalided from service.	Ran.	Transferred.	Continued to next	Number of sick this year.
INJURIES—Continued.								may		DED.	No.
Fracture, tibia and fibula, compound, "G" (Class XX, Inter. 185C)	1		10	1			. 1		. 1	1	PORT TO THE REAL PROPERTY.
Fracture, tibia and fibula, compound "L" (Class XX, Inter. 185C).				5				*****		134	
Fracture, tibia and fibula, compound, "LR" (Class XX,	4		5	4	•••••	•••••	. 2				THE T
Inter. 1850). Fracture, tibia and fibula, simple, "G" (Class XX, Inter. 18150). Fracture, tibia and fibula, simple, "H" (Class XX, Inter. 1886) Fracture, tibia and fibula, simple, "I" (Class XX, Inter. 1850) Fracture, tibia and fibula, simple, "J" (Class XX, Inter. 1850) Fracture, tibia and fibula, simple, "L" (Class XX, Inter. 1850) Fracture, tibia and fibula, simple, "L" (Class XX, Inter. 1850) Fracture, tibia and fibula, simple, "L" (Class XX, Inter. 1850)		2	******	1	•••••			•••••	•••••	1	
Fracture, tibia and fibula, simple,	8		19	19	4		1		17	18791	The second
Fracture, tibia and fibula, simple,	3	7	7	2	•••••	•••••		•••••		1	117.3
Fracture, tibia and fibula, simple,	1	5		3	******		1		6	1330	AND THE PERSON NAMED IN
Fracture, tibia and fibula, simple,	4	13	20	3	•••••	******			6	UN S	COLUMN TO
Fracture, ulna, compound, "G"		1	20	11	3		******	, 2	18	3	1,424
Fracture, ulna, compound, "G" (Class XX, Inter. 185C) Fracture, ulna, simple, "G" (Class XX, Inter. 185C)		16	7	5	5	*****	1	******			******
(Class XX. Inter. 185C)		10	1	1	9	•••••		******	11	2	166
Fracture, ulna, simple, "I" (Class XX, Inter. 185C)		5	1	1	******			•	2	3	11 139
(Class XX, Inter, 185C)		9	6	6	5	*****			7	2	269
Fracture, ulna, simple, "L" (Class XX, Inter. 185C)		7	1	4			1		1	2	108
Fracture, unqualified, compound, "G" (Class XX, Inter. 1850).			1	1	9		-60_13+	*****	mico		3
Fracture, unqualified, compound, "H" (Class XX, Inter. 1850).	1	5	1	3	1		*****	******	2	1	157
Fracture, unqualified, compound, "I" (Class XX, Inter. 185C)	4	7	1	11				*****		1	441
Fracture, unqualified, compound, "J" (Class XX, Inter. 185C)	1	1	11/	2				*****		The state of	64
Fracture, unqualified, compound, "L" (Class XX, Inter. 185C).	1	7	- 2	8			******		2		97
Fracture, unqualified, simple, "G" (Class XX, Inter. 185C).	6	25	13	21	2		5		13	3	1,038
Fracture, unqualified, simple, "H" (Class XX, Inter. 185C).	2	16	4	15					7	de la	423
Fracture, unital, simple, "L" (Class XX, Inter. 185C) Fracture, unqualified, compound, "G" (Class XX, Inter. 185C) Fracture, unqualified, compound, "H" (Class XX, Inter. 185C) Fracture, unqualified, compound, "I" (Class XX, Inter. 185C) Fracture, unqualified, compound, "J" (Class XX, Inter. 185C) Fracture, unqualified, compound, "L" (Class XX, Inter. 185C) Fracture, unqualified, simple, "H" (Class XX, Inter. 185C) Fracture, unqualified, simple, "H" (Class XX, Inter. 185C) Fracture, unqualified, simple, "J" (Class XX, Inter. 185C)	8	22	8	30	2				6	No.	611
Fracture, unqualified, simple, "J" (Class XX, Inter. 1850)	7	14	5	20			1	1	3	1	441
"L" (Class XX, Inter. 185C)	7	67	12	61	2				20	3	1, 255
Class XX, Inter. 185C)		20	17	12	1		1		16	7	693
Fracture, unqualified, simple, "L" (Class XX, Inter. 1850). Fracture, vertebra, simple, "G" (Class XX, Inter. 1850). "Gracture, vertebra, simple, "GR" (Class XX, Inter. 1850).		1							1		59
Fracture, vertebra, simple, "I" (Class XX, Inter 185C) Fracture, vertebra, simple, "J" (Class XX, Inter 185C)	1	3	5		9		2		6	1	630
(Class XX, Inter. 185C)		4	8	2	1				5	4	177
Tracture, vertebra, simple, "L" (Class XX, Inter. 185C). Trostbite, ear, "L" (Class XX,		6	5	2	2	2			3	2	124
		2		1	1					1	2
Frostbite, finger, "L" (Class XX, Inter. 178)		3		2			-			1	6

Hemorrhauter Linter, 186).

TABLE 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917—Continued.

	Tal	ken up	as—		10	D	isposit	ion.			days
Diagnoses.	Remaining from last year.	Admitted.	Readmitted.	Duty.	Diagnosis changed.	Died.	Invalided from service.	Ran.	Transferred.	Continued to next year.	Number of sick d
INJURIES—Continued.								-			
Frostbite, foot, "L" (Class XX, Inter. 178). Frostbite, hand, "L" (Class XX, Inter. 178). Frostbite, multiple, "L" (Class XX, Inter. 178).		8			5					2	
Inter. 178) (Class XX,		3	1	3				•••••	1	. 1	
Frostbite, unqualified, "L" (Class XX, Inter. 178) Heat cramps, "L" (Class XX,		4	8	3		. 1			2		
Inter, 179A 1		89	3		1	•••••			2		266
Hematoma, ankle, traumatic, "L" (Class XX, Inter. 186) Hematoma, ear, traumatic, "J" (Class XX, Inter. 186)		1	1						1	•••••	31 17
(Class XX, Inter. 186) Hematoma, elbow, traumatic, "J" (Class XX, Inter. 186) Hematoma, face, traumatic, "G" (Class XX, Inter. 186) Hematoma, foot, traumatic, "L" (Class XX, Inter. 186) Hematoma, leg, traumatic, "G" (Class XX, Inter. 186) Hematoma, leg, traumatic, "J" (Class XX, Inter. 186) Hematoma, leg, traumatic, "L" (Class XX, Inter. 186) Hematoma, leg, traumatic, "L" (Class XX, Inter. 186)		. 1		1							
(Class XX, Inter. 186)		1	•••••	1							`4
Hematoma, leg, traumatic, "G" (Class XX, Inter. 186)	•••••	1		1				•••••	•••••	•••••	5
(Class XX, Inter. 186) Hematoma, leg, traumatic, "L"		1	1	1	1						9
(Class XX, Inter, 186)	•••••	1		1	•••••						13
"G" (Class XX Inter 186)		1	1						1	•••••	8
Hematoma, scrotum, traumatic, "L" (Class XX, Inter. 186) Hematoma, thigh, traumatic, "J" (Class XX, Inter. 186) Hematoma, thigh, traumatic,		1	1	2							25
Hematoma, unqualified, traumatic, "G" (Class XX, Inter. 186)	•••••	2	•••••	1	•••••		·····		1	•••••	8
Hematoma, unqualified, trau- matic, "H" (Class XX. Inter.	•••••	2		2		•••••					45
Hematoma, unqualified, trau- matic, "I" (Class XX, Inter-		2	•••••	2	•••••						3
Hematoma, unqualified, trau- matic, "J" (Class XX, Inter-	•••••		. 1		•••••	•••••				1	95
Hematoma, unqualified, traumatic, "K" (Class XX, Inter.		1	1		1		•••••		1		11
Hematoma, unqualified, traumatic, "L" (Class XX, Inter.		1		. 1							15
Hemorrhage into eyeball, traumatic, "J" (Class XX, Inter.	•••••	5		3				•••••	2		15
Hemorrhage into eveball tron		1	1				1		1		28
matic, "L" (Class XX, Inter. 186). Hemorrhage into joint, hand, traumatic, "K" (Class XX, Inter. 186).		4	2	2			1		2	1	138
		1		1							1
Hemorrhage into joint (unqualified), traumatic, "L" (Class XX, Inter. 186). Hemorrhage under conjunctiva,		1	1	1					1		6
traumatic, "J" (Class XX, Inter. 186)		2	1	2					1		11

TABLE 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917—Continued.

	Tak	en up	as-			D	isposit	ion.			days
Diagnoses.	Remaining from last year.	Admitted.	Readmitted.	Duty.	Diagnosis changed.	Died.	Invalided from service.	Ran.	Transferred.	Continued to next year.	Number of sick this year.
INJURIES—Continued.						,			3-3		77
Hemorrhage under conjunctiva, traumatic, "L" (Class XX,							BZ	Sie Contract	-ir-		Silvery 3
Inter. 186)		4	1	4					1		37
XX, Inter. 186)		1							1		
XX, Inter. 186) intracranial injury, "G" (Class XX, Inter. 186) intracranial injury, "GR" (Class		35	26	. 29	8	3 2	1		18	3	900
ntra oranial injury (Class		1		1							3
ntracranial injury, "J" (Class XX, Inter. 186). ntracranial injury, "J" (Class XX, Inter. 186). ntracranial injury, "L" (Class XX Inter. 186)		5	1	3		. 1			1	1	109
XX, Inter. 186)		13	12	12	1	1 1			11		241
XX, Inter. 186)	1	31	16	20	2	2 1	6		15	4	675
XX, Inter. 186)		7	2	6		. 1			2		194
ntraspinal injury, "J" (Class XX, Inter. 186). Multiple injuries, extreme, "CR"		1				. 1					
(Class X X. Inter. 186)		1				. 1					
Aultiple injuries, extreme, "F" (Class XX, Inter. 186)	1	1		1			1				
(Class XX, Inter. 186)		6	1	1		. 2			2	2	15
Aultiple injuries, extreme, "GR" (Class XX, Inter. 186)		2				2				12.7	
Aultiple injuries, extreme, "H" (Class XX, Inter. 186)		2	4						5	1	306
Multiple injuries, extreme, "I" (Class XX, Inter, 186)		1				1		. 1100		22	
fultible injuries, extreme, "K"		22				22					
(Class XX, Inter. 186)		4		2		1			1	******	18
"L" (class XX, Inter. 180) "L" (class XX, Inter. 186) Lupture, kidney, traumație, "G" (class XX, Inter. 186) Lupture, lacrymal duct. frau.		1			1			22 393		east !	81
Rupture, kidney, traumatic,		2	1		1		700		1	1	7
Rupture, lacrymal duct, traumatic, "J" (Class XX, Inter.							- Cana			i eni	Bento B
1981		1		1							5
Rupture, larynx, traumatic, "H" (Class XX, Inter. 186) Rupture, larynx, traumatic, "L" (Class XX, Inter. 186)		1	1		1				1		6
(Class XX, Inter. 186)		1	1	1					1		16
upture, ligament, traumatic, "I" (Class XX, Inter. 186) tupture, ligament, traumatic,		1		1							- 14
"J" (Class A.A. Illier, 186)		2	1	3							10
Class XX, Inter. 186)		1				1					
(Class XX, Inter. 186)		1		1							9
tupture, muscle, traumatie, "G" (Class XX, Inter. 186). tupture, muscle, traumatie, "L" (Class XX, Inter. 186).	1	4	3	4		,	1		2	1	164
"E" (Class XX. Inter. 186)		9	1	* 8	1				1.		56
"F" (Class XX. Inter. 186)		2		2							3
apture, tymeanum, traumatic,		3	1	4.			.Sec.		1 000		52
"L" (Class XX, Inter. 186)		2	4	2	2				2.	.000	15
"J" (Class XX, Inter. 186). Lupture, tym anum, traumatic, "L" (Class XX, Inter. 186). Lupture, unqualified, traumatic, "G" (Class XX, Inter. 186) Lupture, unqualified, traumatic, "J" (Class XX, Inter. 186)		2.		2.				1			6
"J" (Class XX, Inter. 186)		1.		1.				Thing	Tabas I	200	41

TABLE 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917—Continued.

	Tak	cen up	as—				Dispos	ition.			days
Diagnoses.	Remaining from last year.	Admitted.	Readmitted.	Duty.	Diagnosis changed.	Died.	Invalided from	, Ran.	Transferred.	Continued to next	f sick year.
INJURIES—Continued.											
Rupture, uretha, traumatic, "G" (Class XX, Inter. 186) Rupture, uretha, traumatic, "I" (Class XX, Inter. 186) Rupture, uretha, traumatic, "L" (Class XX, Inter. 186) Smoke, inhalation, "C" (Class XX, Inter. 168B). Smoke inhalation, "L" (Class		1 3	1 1 1		2		1	4		2	
Sprain, ankle, "F" (Class XX		2		2	2						3
Sprain, ankle, "G" (Class XX.		1								1	1
Inter. 185B) Sprain, ankle, "H" (Class XX, Inter. 185B)		345	61	324	11	l			. 56	3 15	3,217
Sprain, ankle, "I" (Class XX,		6		. 6							34
Sprain, ankle, "J" (Class XX,		172	38	100						1	
Sprain, ankle, "K" (Class XX, Inter. 185B) Sprain, ankle, "L" (Class XX,		2	1	166					. 36	3	
		227	49	218			. 2		94		70
Sprain, elbow, "G" (Class XX, Inter. 185B)	1	24	3	22					34		2,735 239
Sprain, elbow, "GS" (Class XX, Inter. 185B) Sprain, elbow, "H" (Class XX,		1.		. 1					1		3
Inter 185B) Sprain, elbow, "I" (Class XX, Inter 185B)		1.		1							3
Inter. 185B). Sprain, elbow, "J" (Class XX,		2		2							10
Sprain, elbow, "L" (Class XX		12	3	11					4		70
Inter 185B). Sprain, hip, "G" (Class XX, Inter 185B).		7 -		5						2	89
Inter 185B). Sprain, hip, "J" (Class XX, Inter 185B).		7	2	5			1		3	·	104
Sprain, hip, "L" (Class XX, Inter. 185B)	• • • • •	1.		1							2
Sprain, knee, "G" (Class XX,		2	4	4	1				1		22
Sprain, knee, "G" (Class XX, Inter. 185B) Sprain, knee, "J" (Class XX, Inter. 185B)		79	32	87	2			1	18	3	1,283
Inter 1950		79	34	80	3		1	• • • • • •	27	2	1,033
Sprain, mee, "L" (Class XX, Inter 185B). Sprain, metacarral, "G" (Class XX, Inter 185B).		1.			1						35
Sprain, metacarral, "G" (Class XX, Inter, 185B)		6	9	57	1		2		6	1	663
XX. Inter 185B)		1		6 .			•••••				43
XX. Inter. 185B)		9	2	11							21
XX, Inter. 185B)		17	1	17					1		74 130
Sprain, metatarsal, "G" (Class XX, Inter. 185B).		3		3.							19
XX, Inter. 185B).		3	1	3	1.						19
XX, Inter. 185B) Sprain, metatarsal, "J" (Class XX, Inter. 185B) Sprain, metatarsal, "L" (Class XX, Inter. 185B) XX, Inter. 185B) Sprain, multiple, "G" (Class XX Inter. 185B)		4	2	5 .						1	-80
		2	1	1	1.				1.		7 .
Sprain, multiple, "L" (Class XX, Inter. 185B). Sprain, pelvis, "G" (Class XX, Inter. 185B).		1	• • • • •	1.							9
Inter. 185B)		5	4	2	2 .				5.		192

TABLE 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917—Continued.

acidososi	Take	n up a	s-		o psi	Dis	positio	n.			days
Diagnoses.	Remaining from last year.	Admitted.	Readmitted.	Duty.	Diagnosis changed.	Died.	Invalided from service.	Ran.	Transferred.	Continued to next year.	Number of sick this year.
INJURIES—Continued.								ndsad		II B	1
Sprain, pelvis, "H" (Class XX,		1		1		1	on in	1127	450	0	1
Inter. 185B). Sprain, pelvis, "I" (Class XX, Inter. 185B). Sprain, pelvis, "L" (Class XX, Inter. 185B). Sprain, shoulder, "G" (Class XX, Inter. 185B). Sprain, shoulder, "I" (Class XX, Inter. 185B). Sprain, shoulder, "I" (Class XX, Inter. 185B). Sprain, shoulder, "J" (Class XX, Inter. 185B). Sprain, shoulder, "L" (Class XX, Inter. 185B). Sprain, shoulder, "L" (Class XX, Inter. 185B). Sprain, unqualified, "F" (Class XX, Inter. 185B). Sprain, unqualified, "H" (Class XX, Inter. 185B). Sprain, unqualified, "H" (Class XX, Inter. 185B). Sprain, unqualified, "I" (Class XX, Inter. 185B). Sprain, unqualified, "J" (Class XX, Inter. 185B). Sprain, unqualified, "J" (Class XX, Inter. 185B). Sprain, unqualified, "J" (Class XX, Inter. 185B). Sprain, vertebral, "G" (Class XX, Inter. 185B). Sprain, vertebral, "J" (Class XX, Inter. 185B). Sprain, vertebral, "L" (Class XX, Inter. 185B). Sprain, wrist, "G" (Class XX Inter. 185B). Sprain, wrist, "H" (Class XX Inter. 185B). Sprain, wrist, "I" (Class XX Inter. 185B). Sprain, wrist, "I" (Class XX Inter. 185B). Sprain, wrist, "I" (Class XX Inter. 185B). Sprain, wrist, "L" (Class XX Inter. 185B). Sprain, abdominal, "L" (Class XX, Inter. 186B). Strain, abdominal, "L" (Class		1		1				A RECORD	V. Ash		8
Sprain, pelvis, "L" (Class XX,		11	5	8	1				5	2	170
Sprain, shoulder, "G" (Class		15	3	14		•••••	ERRIV		2	2	130
Sprain, shoulder, "H" (Class		1		1			et ell i		10 10	1000	9
Sprain, shoulder, "I" (Class							XX	sal ()			22
Sprain, shoulder, "J" (Class		3		3			12.8		3	1	84
Sprain, shoulder, "L" (Class		19	2				. X X	and a	1	2	144
XX, Inter. 185B)		18	. 1	16			NE.		ME HE		diena 8
XX, Inter. 185B)		1		•••••			7.2		1		1,206
XX, Inter. 185B)	- 7				4			2010	10	2	
XX, Inter. 185B)		3		3				000.77			14
XX, Inter. 185B)	. 1	1		2							158
XX, Inter. 185B)	- 6	61	14	69	2	2	1		9	endle.	824
XX, Inter. 185B)	. 8	104	*18	102	(3			22	worlie.	1,731
XX, Inter. 185B)	-	11	7	12			2		3	1	117
XX, Inter. 185B)		1							1		34
XX, Inter. 185B)		3	1 8	4			1			1	140
XX, Inter. 185B)		28	11	23			. 8	3	5	3	307
XX, Inter. 185B)		. 1		. 1							4
Sprain, wrist, "G" (Class XX Inter, 185B)	,	1 88	1	1 80		2			10	5	696
Sprain, wrist, "H" (Class XX Inter. 185B)	,			1 8					. 2		96
Sprain, wrist, "I" (Class XX Inter. 185B)	,	- 4	1	1 1							26
Sprain, wrist, "J" (Class XX Inter, 185B)	,	40		6 40		1			. 4	1 1	225
Sprain, wrist, "L" (Class XX Inter, 185B)	,	. 54	1	2 4	7	1			. 1	3 8	283
Strain, abdominal, "G" (Clas	S		1	1 :	2						11
Strain, abdominal, "H" (Clas	S			1	1						7
Strain, abdominal, "J" (Clas	S		1	1	2					1	22
Strain, abdominal, "L" (Clas	S	3		2 3	0	3	asat .		. 1	1	255
Strain, ankle, "G" (Class XX	,		3		2				la Te	1	5
Strain ankle "L" (Class XX			4		2			1 22	toni	2	11
Inter. 186). Strain, arm, "G" (Class XX	ξ,						raul.	118	legis	1	63
Strain, arm, "J" (Class XX	ζ,		3		3			1		2	37
Inter. 186)	ζ,		3		3		ZER	7			14
Inter. 186)	ζ,	-	3		3		330	1		1	2
Inter. 186)			1	1	1				-1	1	-

Strain St

Table 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917—Continued.

	Tal	ken up	as-			D	isposit	ion.			days
Diagnoses.	Remaining from last year.	Admitted.	Readmitted.	Duty.	Diagnosischanged.	Died.	Invalided from service.	Ran.	Transferred.	Continued to next	Number of sick this year.
INJURIES—Continued.	7										
Strain, back, "G" (Class XX, Inter. 186). Strain, back, "H" (Class XX, Inter. 186). Strain, back, "H" (Class XX, Inter. 186). Strain, back, "I" (Class XX, Inter. 186). Strain, back, "J" (Class XX, Inter. 186). Strain, back, "L" (Class XX, Inter. 186). Strain, chest, "G" (Class XX, Inter. 186). Strain, chest, "J" (Class XX, Inter. 186). Strain, chest, "L" (Class XX, Inter. 186). Strain, foot, "G" (Class XX, Inter. 186). Strain, foot, "G" (Class XX, Inter. 186). Strain, foot, "L" (Class XX, Inter. 186).		14	5 1		1				2	1	135
Inter. 186)		1		1							29
Inter. 186)		4	1	4					1		16
Inter. 186) Strain, chest, "G" (Class XX)		41	. 10	46			2		3		439
Inter. 186) Strain, chest, "J" (Class XX.		1								1	12
Inter. 186) Strain, chest, "L" (Class XX,		2	2	4							11
Inter. 186) Strain, foot, "G" (Class XX,		1	•••••				;		1		
Strain, foot, "J" (Class XX,		4	1	4					1		18
Strain, foot, "L" (Class XX,		1	1	1					. 1		3
Strain, forearm, "G" (Class XX,		7		6	•••••				1		23
		1	1	1							47
Inter. 186) Strain, gluteal, "L" (Class XX, Inter. 186)		3	1	1			•••••				2
Strain, inguinal, "G" (Class XX, Inter, 186). Strain, inguinal, "G" (Class XX, Inter, 186). Strain, inguinal, "H" (Class XX, Inter, 186). Strain, inguinal, "J" (Class XX, Inter, 186).		1	1	1					1	1	32
Strain, inguinal, "H" (Class XX, Inter, 186)		1		1							25
Strain, inguinal, "J" (Class XX, Inter. 186).		1		1	•••••						Fig.
Strain, knee, "G" (Class XX, Inter, 186). Strain, inguinal, "L" (Class XX, Inter, 186). Strain, knee, "G" (Class XX, Inter, 186). Strain, knee, "J" (Class XX, Inter, 186).		2		2		/					8
Strain, knee, "G" (Class XX, Inter. 186).		2		2							20
Strain, knee, "J" (Class XX, Inter. 186)			1	1							23
Strain, leg, "G" (Class XX, Inter. 186)		. 2	1	2						1	27
Inter, 186). Strain, leg, "G" (Class XX, Inter, 186). Strain, leg, "G" (Class XX, Inter, 186). Strain, leg, "J" (Class XX, Inter, 186). Strain, leg, "L" (Class XX, Inter, 186).		4	1	4					1	a a	33
Strain, leg, "L" (Class XX, Inter. 186)		5	1	5					1		24
Inter, 186). Strain, multiple, "L" (Class XX, Inter, 186). Strain, neck, "J" (Class XX, Inter, 186). Strain, neck, "L" (Class XX, Inter, 186).		1		1							10
Inter. 186)		10	3	9					4		31
Inter. 186)		5	4	6					3		46
Strain, neck, "L" (Class XX, Inter, 186). Strain, shoulder, "G" (Class XX, Inter, 186). Strain, shoulder, "H" (Class XX, Inter, 186). Strain, shoulder, "H" (Class XX, Inter, 186). XX, Inter, 186).	4		1	1			:				23
XX, Inter. 186)		1		1							4
XX, Inter. 186). Strain, shoulder, "L" (Class		5		5							. 14
XX, Inter. 186) Strain, thigh, "G" (Class XX,		4	1	3					2		31
Inter. 186)		1	2	2					1		31
Strain, thigh, "L" (Class XX,		5	2	7							77
Strain, unqualified, "G" (Class		9	2	7	•••••				3	1	19
XX, Inter. 186)]	32	4	30	1			اا	5		256

TABLE 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917—Continued.

and the state of	Take	en up s	as—	-85.0	pu anni	Di	spositi	on.			days
Diagnoses.	Remaining from last year.	Admitted.	Readmitted.	Duty.	Diagnosis changed.	Died.	Invalided from service.	Ran.	Transferred.	Continued to next year.	Number of sick of this year.
INJURIES—Continued.										THE ST	
Strain, unqualified, "I" (Class XX, Inter. 186)	1	2 17 64	3	1 14 66	2 2				1 4	3	97 616
Inter. 186)	•••••	1		1							3
Strain, wrist, "L" (Class XX, Inter, 186). Strangulation, "A" (Class XX, Inter, 186).		2		1					1		5
Strangulation, "I" (Class XX,	•••••	6		1		5					3
Strangulation, "L" (Class XX,		1				1				1881	2
Inter. 186) Submersion (nonfatal), "D"		9	1	1	1				1	(aki	36
Submersion (nonfatal), "D" (Class XX, Inter. 169A)		1	1	8	1						4
Sunburn, arms, "L" (Class XX,		8	1	0							31
Inter. 167). Sunburn, back, "L" (Class XX.		1		1						GAL	5
Inter. 167) Sunburn, foot, "L" (Class XX, Inter. 167) Sunburn, legs, "L" (Class XX, Inter. 167)		1		1							7
Sunburn, legs, "L" (Class XX, Inter. 167)		6	1	6					1		23
Sunburn, multiple, "J" (Class		1		1							22
XX, Inter. 167) Sunburn, multiple, "L" (Class XX, Inter. 167)		10		8					2		33
XX, Inter. 167) Sunburn, shoulders, "L" (Class XX, Inter. 167)		9		8					1		30
Sunburn, unqualified, "L" (Class XX, Inter. 167). Sunstroke, "L" (Class XX,		25	3	26					2		129
		11	9	12	2				5	1	177
Synovitis, ankle traumatic, "G" (Class XX, Inter. 186) Synovitis, ankle traumatic, "I" (Class XX, Inter. 186)			3	2	1						73
Synovitis, ankle traumatic, "1" (Class XX, Inter. 186)		1	1						1	1	4
(Class XXX, Inter. 186)		2		1					1		4
(Class XX, Inter. 186)		1		1							2
(Class XX, Inter. 186)		2	1		1		. 1		1		66
(Class XXX, Inter. 186). Synovitis, elbow traumatic, "G" (Class XX, Inter. 186). Synovitis, elbow traumatic, "I" (Class XX, Inter. 186). Synovitis, elbow traumatic, "L" (Class XX, Inter. 188). Synovitis, knee traumatic, "G" (Class XX, Inter. 188). Synovitis, knee traumatic, "G"		1	1	1					1	-/	19
(Class XX, Inter. 186)	1	61	36	52	5		. 3		32	6	1,098
(Class XX, Inter. 186). Synovitis, knee traumatic, "H" (Class XX, Inter. 186). Synovitis, knee traumatic, "I" (Class XX, Inter. 186).		6	4	6			. 1		2		260
(Class XX, Inter. 186) Synovitis, knee traumatic, "J"		4		3					2		14
Synovitis, knee traumatic, "J" (Class XX, Inter. 186). Synovitis, knee traumatic, "K"		. 29	19	33	2	2			11		417
Synovitis, knee traumatic, "K" (Class XX, Inter. 186). Synovitis, knee traumatic, "L" (Class XX, Inter. 186).		1								1	21
(Class XX, Inter. 186) Synovitis, metacarpal traumatic,		. 56			3	3	1 7. 2		25	11	1,190
Synovitis, metacarpal traumatic, "G" (Class XX, Inter. 186) Synovitis, metacarpal traumatic,		1		1							5
Synovitis, metacarpal traumatic, "L" (Class XX, Inter. 186) Synovitis, metatarsal traumatic, "L" (Class XX, Inter. 186)		. 4	2	4					2		18
"L" (Class XX, Inter. 186)		. 1		1						1	10

TABLE 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917—Continued.

	То	ken up	98-				Dian - '				100
		теп пр	as-	-		1	Disposi	tion.			days
Diagnoses.	Remaining from last year.	Admitted.	Readmitted.	Duty.	Diagnosis changed.	Died.	Invalided from service.	Ran.	Transferred.	Continued to next	sick year.
INJURIES—Continued.											
Synovitis, shoulder traumatic, "G" (Class XX, Inter. 186) Synovitis, shoulder traumatic, "J" (Class XX, Inter. 186) Synovitis, unqualified, traumatic, "E" (Class XX, Inter. 186). Synovitis, unqualified traumatic, "G" (Class XX, Inter. 186).		. 1			2	-			. 1		. 18
Synovitis, unqualified traumatic, "G" (Class XX, Inter. 186).		1				1					. 27
Synovitis, unqualified traumatic, "I" (Class XX, Inter.		11	15			1			. 9		. 403
Synovitis, unqualified trau- matic, "J" (Class XX, Inter.	1			1			-		. 1		. 19
Synovitis, unqualified trau- matic, "L" (Class XX, Inter.	•••••	9	6	9]	1 5		347
Synovitis, wrist traumatic, "G" (Class X X, Inter, 186)		25	8	24					. 9		179
(Class X X Inter 186)		1	1	1					1		32
Synovitis, wrist traumatic, "L" (Class XX, Inter. 186). Thermic, fever, "L" (Class XX, Inter. 179A).	•••••	2		1						1	3
Torsion, spermatic cord, trau- matic, "L" (Class XX, Inter.		16	2	16					2	•••••	60
Wound, gunshot, abdomen, "A" (Class XX, Inter, 170) Wound, gunshot, abdomen, "B"		3	2	1					2		2 95
		2				2					3
Wound, gunshot, abdomen, "E" (Class XX, Inter. 170) Wound, gunshot, abdomen, "L" (Class XX, Inter. 170)		7	5	2	•••••	. 3	2		5	•••••	182
(Class XX. Inter. 170)			2				1		2		6
Wound, gunshot, ankle, "E" (Class XX, Inter. 170). Wound, gunshot, arm, "E" (Class XX, Inter. 170). Wound, gunshot, arm, "F"		1		1							74
(Class X X . Inter. 170)	3	9	8	12	1		1	•••••	6.		500
wound, gunshot, arm, "K" (Class XX, Inter. 170) Wound. gunshot (main) artery or vein, "K" (Class XX.	4	•••••	2				4		2 .		432
Inter. 170)		1		•••••		1					
(Class XX Inter 170)		1	1	1		1			1.	••••	19
Wound, gunshot, back, "B" (Class XX, Inter. 170). Wound, gunshot, back, "E" (Class XX, Inter. 170). Wound, gunshot, back, "E"		1.				1					,
(Class XX, Inter. 170)		2 . 19 .	•••••	1			1				15
Wound, gunshot, brain, "B" (Class XX, Inter. 170).		1.				19 1					34
(Class XX, Inter. 170). Wound, gunshot, brain, "A" (Class XX, Inter. 170). Wound, gunshot, brain, "B" (Class XX, Inter. 170). Wound, gunshot, brain, "E" (Class XX, Inter. 170). Wound, gunshot, brain, "K" (Class XX, Inter. 170).	••••	4	3	3			1		3.		147
(Class AA, Inter. 170)	1	1	1]	1].		1	1		-		76

TARLE 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917—Continued.

	Tak	en up	as—	:		Di	spositi	ion.			days
Diagnoses.	Remaining from last year.	Admitted.	Readmitted.	Duty.	Diagnosis changed.	Died.	Invalided from service.	Ran.	Transferred.	Continued to next year.	Number of sick this year.
INJURIES—Continued.								-			
Wound, gunshot, eye, "E" (Class XX, Inter. 170) Wound, gunshot, eye, "F" (Class XX, Inter. 170)		1	1	1					1		23
Wound, gunshot, eve, "L" (Class XX, Inter. 170) Wound, gunshot, face, "A"		1		1							5
(Class XX, Inter. 170)		1	1	1					1		17 3
(Class XX, Inter. 170)		3		1 2					1		-
Wound, gunshot, finger, "A" (Class XX, Inter. 170) Wound, gunshot, finger, "B" (Class XX, Inter. 170)		1	1		1				1		10
(Class XX. Inter, 170)		17	11	11	1		1		. 13	2	79 430
(Class XX, Inter. 170)		1 10	1 7	5			1		7	1 4	45 674
(Class XX, Inter, 170)	`	3	2	1					3	1	115
(Class XX, Inter. 170)	•••••	1	1	1							12
(Class XX, Inter. 170)		17	12	12			2		9	6	730
(Class XX, Inter. 170)		1							1		9 43
(Class XX, Inter. 170)		3				3					
(Class XX, Inter. 170)		2	1			2				1	143
Wound, gunshot, hip, "E" (Class XX, Inter. 170)		2	2	2					1	1	44 73
(Class XX. Inter. 170)			1		1				2	1	
Wound, gunshot, leg, "B" (Class XX, Inter. 170)	7	25	1 25	29	1	1			21	1	52 1,133
Wound, gunshot, leg, "F" (Class XX, Inter. 170) Wound, gunshot, leg, "K"			1						1		
(Class XX, Inter. 170)	4	1 2	6	6 2	. 1		1		3		456 41
Wound, gunshot, lung, "A"		1	2	1		1			1		47
Wound, gunshot, lung, "B" (Class XX, Inter. 170). Wound, gunshot, lung, "E" (Class XX, Inter. 170). Wound, gunshot, lung, "E"		1	1	1							69
Wound, gunshot, maxilla, "E" (Class XX, Inter. 170) Wound, gunshot, multiple, "E" (Class XX, Inter. 170)		3	1 4	1 3					2	2	23 96

Wound Wound Wound Wound

"F"
Wound, "H"
"K",((
"K",(()
"K",(()
"K",(()
"Yound, in
"Class XX
Wound, in
(Class XX
Wound, in
(Class XX, ()
"Class XX, ()
"Cl

TABLE 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917—Continued.

g and the	Tal	ken up	as—		e qu'i	D	isposit	ion.			days
Diagnoses.	Remaining from last year.	Admitted.	Readmitted.	Duty.	Diagnosis changed.	Died.	Invalided from service.	Ran.	Transferred.	Continued to next year.	Number of sick d
INJURIES—Continued.								OD HOT			
Wound, gunshot, multiple, "ES" (Class XX, Inter. 170) Wound, gunshot, multiple, "G" (Class XX, Inter. 170) Wound, gunshot, multiple, "L" (Class XX, Inter. 170)		1	1						1	1	40
(Class XX, Inter. 170)		1		1							21
Wound, gunshot, neck, "E" (Class XX Inter 170) Wound, gunshot, neck, "K" (Class XX, Inter 170)		2		2					2		96
Wound, gunshot, rectum, "E" (Class XX, Inter. 170)			5				1		4		177
Wound, gunshot, thigh, "B" (Class XX, Inter. 170)	•••••	1 1	1	1			east.	7	1		20
(Class XX, Inter, 170)		12	6	11			2000		5	2	
(Class XX, Inter. 170)		2	1	. 3				2.2.			94
Wolind, gunshot, thigh, "L"		2				1	1				
Wound, gunshot, thorax, "A" (Class XX, Inter. 170) Wound, gunshot, thorax, "B" (Class XX, Inter. 170) Wound, gunshot, thorax, "E"		5	4	2	1	2			4		21
(Class XX, Inter. 170)		2				2		*			
Wound, gunshot, thorax, "E" (Class XX, Inter. 170) Wound, gunshot, thorax, "L" (Class XX, Inter. 170) Wound, gunshot, thorax, "L"		5	2			2	1		2	2	75
Wound, gunshot, toes, "E" (Class XX, Inter. 170)	•••••	2	6	2		1					
Wound, gunshot, toes, "L"		1	O	1			1		4	1	224
Wound, gunshot, unqualified,		1							1		19
would, guisitot, unqualmed,		1							1		
	1	12	6	9	1		1		6	2	244
Wound, gunshot, unqualified, "F" (Class XX, Inter. 170) Wound, gunshot, unqualified, "H" (Class XX, Inter. 170)	•••••		1	1							6
"H" (Class XX, Inter. 170) Wound, gunshot, unqualified, "K" (Class XX, Inter. 170)		1			•••••					1	
Wound, gunshot, unqualified, "L" (Class XX, Inter. 170) Wound, incised, abdomen, "B"	1	2	4	3					3		273
(Class XX, Inter. 171)		1	2	2					1	0.00	45 19
Wound, incised, abdomen, "L" (Class XX, Inter. 171).		1		1				1111			10
Wound, incised, ankle, "E" (Class XX, Inter. 171). Wound, incised, ankle, "L"		1		1							2
(Class XX, Inter. 171). Wound, incised, arm, "A"		2	1	1			1		1		34
(Class XX, Inter. 171)		1	1	1					1		19
Class XX, Inter. 171)		1				•••••			1		
(Class XX, Inter. 171) Wound, incised, arm, "H" (Class XX, Inter. 171)		2 2	•••••	2 2	•••••	•••••		Jee	4 3	001	11
Wound, incised, arm, "L" (Class XX, Inter, 171)	1	32	2	31				150	3	1	231
Wound, incised, axilla, "L" (Class XX, Inter. 171)		2		1						1	30
Wound, incised, back, "B" (Class XX, Inter. 171)		1							1		bulle &

TABLE 1.-DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917—Continued.

	Tal	cen up	as—			D	isposit	ion.			days
Diagnoses.	Remaining from last year.	Admitted.	Readmitted.	Duty.	Diagnosis changed.	Died.	Invalided from service.	Ran.	Transferred.	Continued to next	Number of sick this year.
INJURIES—Continued.								ignali	100-9	用 不能。	Test .
Wound, incised, back, "L"							l adg	diam'	100	1229	Programme.
Wound, incised, back, "L" (Class XX, Inter. 171)		4		3					1		22
(Class XX, Inter. 171). Wound, incised, ear, "L"		1		1							5
Wound, incised, ear, "L" (Class XX, Inter. 171) Wound, incised, elbow, "L" (Class XX, Inter. 171) Wound, incised, eye, "F" (Class XX, Inter. 171) Wound, incised, eye, "F" (Class	•••••		1	1							2
(Class XX, Inter. 171)		1		1							1
XX, Inter. 171)			2	1					1		60
XX, Inter. 171) Wound, incised, eve, "G" (Class XX, Inter. 171) Wound, incised, eye, "H" (Class XX, Inter. 171) Wound, incised, eye, "I" (Class XX, Inter. 171) Wound, incised, eye, "J" (Class XX, Inter. 171) Wound, incised, eye, "J" (Class XX, Inter. 171)		2		2							1
XX, Inter. 171)		1	1						2		22
XX, Inter. 171)		1		1							49
XX, Inter. 171)		3		3							7
Wound, incised, eye, "L" (Class XX, Inter. 171). Wound, incised, face, "A" (Class		5	3	6			2				79
Wound, incised, face, "A" (Class XX, Inter. 171)		1									10
Wound, incised, face, "B" (Class		0						•••••	1	•••••	
Vound, incised, face, "E" (Class				. 2		•••••		•••••			29
Wound, incised, face, "F" (Class		1		1	•••••	•••••		•••••		•••••	7
Wound, incised, face, "H" (Class	•••••	1	1	1		•••••		•••••	1		16
XX, Inter. 171)		1		1							4
XX, Inter. 171)		1		1							2
XX, Inter. 171)		4	1	4					1		38
(Class XX, Inter. 171)		1.							1		1
(Class XX, Inter. 171)		2.		2							19
(Class XX, Inter. 171)		18	2	16					2	2	153
Vound, incised, finger, "L" (Class XX. Inter. 171)		45	8	42	, .				2		
Vound, incised, foot, "E" (Class		1	9	12	1				1	3	596
Yound, incised, foot, "H" (Class		1						•••••		1	11
Vound, incised, foot, "I" (Class		1.		1	•••••	•••••					4
Vound, incised, foot, "J" (Class		2.		1					1		8
XX, Inter. 171) Wound, Incised, face, "A" (Class XX, Inter. 171) Wound, incised, face, "B" (Class XX, Inter. 171) Wound, incised, face, "E" (Class XX, Inter. 171) Wound, incised, face, "F" (Class XX, Inter. 171) Wound, incised, face, "H" (Class XX, Inter. 171) Wound, incised, face, "J" (Class XX, Inter. 171) Wound, incised, face, "L" (Class XX, Inter. 171) Wound, incised, face, "E" (Class XX, Inter. 171) Wound, incised, fineer, "E" (Class XX, Inter. 171) Wound, incised, fineer, "G" (Class XX, Inter. 171) Wound, incised, fineer, "C" (Class XX, Inter. 171) Wound, incised, foot, "E" (Class XX, Inter. 171) Wound, incised, foot, "E" (Class XX, Inter. 171) Wound, incised, foot, "I" (Class XX, Inter. 171) Wound, incised, foot, "L" (Class XX, Inter. 171) Wound, incised, foot, "L" (Class XX, Inter. 171)		1.		1							7
XX, Inter. 171)		19	4	19			1		2	1	225
(Class XX, Inter. 171)		1	2.						2	1	28
(Class XX, Internal)		2.		2.							5
(Class XX, Inter. 171)		2.		2.							12
(Class XX, Inter. 171)		3	3	3					2	1	62
Vound, incised, foot, "L" (Class XX, Inter. 171). Vound, incised, forearm, "A" (Class XX, Inter. 171). Vound, incised, forearm, "G" (Class XX, Inter. 171). Vound, incised, forearm, "H" (Class XX, Inter. 171). Vound, incised, forearm, "L" (Class XX, Inter. 171). Vound, incised, forearm, "L" (Class XX, Inter. 171). Vound, incised, hand, "E" (Class XX, Inter. 171).			1	1	2				2	1	DENET
Vound, incised, hand, "G" (Class XX, Inter. 171)		3.		2							1
Vound, incised, hand, "(;") (Class XX, Inter. 171) Vound, incised, hand, "H" (Class XX, Inter. 171) Vound, incised, hand, "I" (Class XX, Inter. 171) (Class XX, Inter. 171)				0.							14
Commo 2222, 111001, 1/1)		6	1	0.					1	00000	112

Wound, incis XX, Inter Class XX (Class XX) Inter Class XX, Inter Wound, incis XX, Inter Class XX, Inter C

TABLE 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917—Continued.

	Tal	en up	as		į.	D	isposit	ion.		. 1	days
Diagnoses.	from				anged.		from			next	-
Diagnoses.	ning t year	.peg	itted.		sis ch		ed rvice.		rred.	ued to	of his y
	Remaining fr last year.	Admitted.	Readmitted	Duty.	Diagnosis changed	Died.	Invalided service.	Ran.	Transferred.	Continued to next	Number of sick this year,
INJURIES—Continued.					_		-	-	F	0	-4
				3							
Wound, incised, hand, "L" (Class XX, Inter. 171)	•••••	22	- 8	21					. 2	1	38
XX, Inter. 171)		1		1					!		. 1
Wound, incised, knee, "L" (Class XX, Inter, 171)		6		5						1	
Wound, incised, leg, "É" (Class XX, Inter. 171)		1		1						1	1
XX, Inter. 171)		5	1	6							
Wound, incised, leg, "H" (Class XX, Inter. 171)		1	1	1						1	
Vound, incised, leg, "I" (Class XX, Inter. 171) Vound, incised, leg, "L" (Class		1		1				ļ			
XX, Inter. 171)		14	-2	14			' 1		1		1
(Class XX, Inter. 171)		1		1							
Vound, incised, multiple, "H"			1		1		,				
(Class XX, Inter. 171) Vound, incised, multiple, "L"		1	•••••			,			1		
(Class XX, Inter. 171)		2		. 2							
(Class XX, Inter. 171)		1	1	2		•••••					
(Class XX, Inter. 171)		1		1							
Vound, incised, scalp, "L"		1 12	2	12							
Vound, incised, scrotum, "G"		1	1	12	•••••				2		
Vound, incised, shoulder, "L" (Class XX, Inter, 171)		2	1	1					1		
Yound, incised, testicle, "L" (Class XX, Inter. 171)		1		1					1		
Tound, incised, testicle, "L" (Class XX, Inter. 171) Tound, incised, thigh, "G" (Class XX, Inter. 171) Tound, incised, thigh, "H" (Class XX, Inter. 171) Tound, incised, thigh, "L" (Class XX, Inter. 171) Tound, incised, thorax, "A" (Class XX, Inter. 171) Tound, incised, thorax, "L" (Class XX, Inter. 171) Tound, incised, thorax, "L" (Class XX, Inter. 171) Tound, incised, throat, "A" (Class XX, Inter. 171) Tound, incised, throat, "A" (Class XX, Inter. 171)		3		2						1	-
ound, incised, thigh, "H" (Class XX, Inter. 171)		2		2							
ound, incised, thigh, "L"		7	4	9					2		2
ound, incised, thorax, "A" (Class XX, Inter. 171)		1							1		
(Class XX, Inter. 171)		2	2	3					1		
(class XX, Inter. 171)		4	3	3		1			3		
(Class XX, Inter. 171)	,	2	.1	2					- 1		9
(class XX, Inter. 171). Jound, incised, throat, "B" (Class XX, Inter. 171). Jound, incised, throat, "L" (Class XX, Inter. 171). Jound, incised, throat, "L" (Class XX, Inter. 171).		2	1	2					1		. 1
XX, Inter. 171)		1		. 1	······						
XX, Inter. 171)		1		1							
XX, Inter. 171)		3	1	4							
"B" (Class XX, Inter. 171)		3	2	2	1				. 1	. 1	
"E" (Class X.X. Inter. 171)		1	1	1					1		. 1
Vound, incised, unqualified, "F" (Class XX, Inter. 171)		1	2				1		2		10

Table 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917—Continued.

	Tak	en up	as—			Di	isposit	ion.			days
Diagnoses.	Remaining from last year.	Admitted.	Readmitted.	Duty.	Diagnosischanged.	Died.	Invalided from service.	Ran.	Transferred.	Continued to next year.	Number of sick this year.
INJURIES—Continued.											
Wound, incised, unqualified, "G" (Class XX, Inter. 171) Wound, incised, unqualified, "H" (Class XX, Inter. 171) Wound, incised, unqualified, "1" (Class XX, Inter. 171) wound, incised, unqualified, "L" (Class XX, Inter. 171)		4 3 2		3 3 2					1		36 29 12 291
"L" ('lass XX, Inter. I'1) Wound, incised, wrist, "H" ('lass XX, Inter. I'1) Wound, incised, wrist, "L"	1	21	5	21	•••••				0		17
Wound, incised, wrist, "L" (Class XX, Inter. 171)		3		3							13
Wound, lacerated, abdomen, 'G" (Class XX, Inter. 186)		2	1	1		1			1		58
Wound, lacerated, abdomen, "J" (Class XX, Inter. 186)	1								1		22
Wound, lacerated, abdomen, "L" (Class XX, Inter. 186) Wound, lacerated, ankle, "G" (Class XX, Inter. 186) (Class XX, Inter. 186) Wound, lacerated, ankle, "H" (Class XX, Inter. 186)		3				2			1		
(Class XX, Inter. 186)		1		1							
(Class XX, Inter. 186)		1		1	•••••						
('lass XX, Inter. 186)		1	1						1	1	138
Wound, lacerated, arm, "E"		1	. 1	1							100
Wound, lacerated, arm, "E" (Class XX, Inter. 186) Wound, lacerated, arm, "F" (Class XX, Inter. 186)		2	1	1					1	1	153
('lass XX, Inter, 186)		10	4	9	2				2	1	164
Wound, lacerated, arm. "H" ('lass XX, Inter. 186) Wound, lacerated, arm, "I"	4	· 21	4	23	1				4	1	358
(Class XX, Inter. 186)	2	14	. 1	15			1		1		273
(Class XX, Inter. 186)		7		6					1		101
(Class XX, Inter. 186)	2	31	2				1		5		194
(Class XX, Inter. 186)		1		1							
Wound, lacerated, chest, "A" (Class XX, Inter. 186)		1		1					1		-
Wound, lacerated, ear, "G" (Class XX, Inter. 186)		3		2						1	11
Wound, lacerated, ear, "H" (Class XX, Inter. 186)		1		1							2
Wound, lacerated, ear, "I" (Class XX, Inter. 186)		1		1							6
Wound, lacerated, ear, "L" (Class XX, Inter, 186) Wound, lacerated, elbow, "G"		5	2	5					2		15
(Class XX, Inter. 186)		4		4							33
(Class XX, Inter. 186) Wound, lacerated, elbow, "L"		1	1	1					1		55
(Class XX, Inter. 186)		2		2							100
(Class XX, Inter. 186) Wound, lacerated, eye, "G" (Class XX, Inter. 186)		7	4	1			1		5 1	2	33
Wound, lacerated, eye, "GR" (Class XX, Inter. 186)		1		6							7
Wound, lacerated, eye, "J" (Class XX, Inter. 186)		3		2					1		7
Wound, lacerated, eye, "K" (Class XX, Inter. 186)		1		1							2

TABLE 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917—Continued.

	Take	n up a	s-			Di	spositi	on.			days
	from				Diagnosis changed.		from .			Continued to next year.	Number of sick this year.
Diagnoses.	ng rear	ri l	ted.	61	sch		d rice.		red.	ned to	of his
	inii st y	ttec	mit		iosi		ide		sfer	ye	ber tl
	Remaining flast year.	Admitted	Readmitted	Duty.	Diagr	Died.	Invalided service.	Ran.	Transferred.	Conti	Num
INJURIES—Continued.											2
Wound, lacerated, eye, "L"									11	. 2	cor
Wound, lacerated, eye, "L" (Class XX, Inter. 186) Wound, lacerated, face, "E"		33	10	26	2		2		11	. 2	625
(Class XX, Inter. 186)			1	1							7
(Class XX, Inter. 186)		1	2	1					2		20
Wound, lacerated, face, "G"		9	2	9					2		53
Wound, lacerated, lace, "H"		1		1							4
(Class XX, Inter. 186)											3
Wound, lacerated, face, "I" (Class XX, Inter. 186) Wound, lacerated, face, "J"		1		1							
(Class XX, Inter. 186)		2	1	3							9
(Class VV Inter 196)		23		22					1		62
Wound, lacerated, finger, "E" (Class XX, Inter. 186) Wound, lacerated, finger, "G" (Class XX, Inter. 186)		7		7					.,		128
Wound, lacerated, finger, "G"		6	1	5					2		40
Wound, lacerated, finger, "H" (Class XX, Inter. 186) (Class XX, Inter. 186)		- 1	_						7	8	1,291
(Class XX, Inter. 186) Wound, lacerated, finger, "I"		85	8	75	3						
		104	9	100	1		. 1		5	6	1,193
Wound, lacerated, finger, "J" (Class XX, Inter. 186)		8	1	8					1		113
Wound, lacerated, finger, "L" (Class XX, Inter. 186)		89	10	84	3				5	7	1,133
Wound, lacerated, foot, "E" (Class XX, Inter. 186)		2		2							26
Wound, lacerated, foot, "G" (Class XX, Inter. 186)				3							58
(Class XX, Inter. 186) Wound, lacerated, foot, "H"		3									
(Class XX, Inter. 186)		9	4	11			. 1		1		214
(Class XX. Inter. 186)		11	2	10					2	1	273
(Class XX. Inter. 186)		9		9							70
Wound, lacerated, foot, "L" (Class XX, Inter. 186)		47	6	45					6	2	439
wonnd lacerated forearm. D			-	-					1		21
(Class XX, Inter. 186)		1							1		24
(Class XX, Inter. 186)	,	2		2							100.00
(Class XX, Inter. 186)		4	1								70
(Class XX, Inter. 186)			. 1	1							86
Wound lacerated torearm. "L"		4	1						. 1		70
(Class XX, Inter. 186)	,										6
(Class XX, Inter. 186)	,	. 1							1		276
(Class XX, Inter. 188)	,	13	3 2	13	3	1					100000
(Class XX, Inter. 186)		. 30) 4	20	3	2				1	368
(Class XX, Inter. 186)		. 21	L 4	19	9	,	-	1	. 3	2	469
Wound, lacerated, hand, "I" (Class XX, Inter. 186) Wound, lacerated, hand, "J" (Class XX, Inter. 188)	,		1 1		4				. 1		33
would, lacerated, hand,		64			3	1			13	1	1,008
Wound, lacerated, hip, "L'	,							-	1		7
(Class XX, Inter. 186)	;	'	2		1				1 '		100
(Class XX, Inter. 186)	,	. 1	1	1 1	0					2	
Wound, lacerated, knee, "H' (Class XX, Inter. 186)		. :	3	.	1	.	- 1	1		.] 1	4

 $\mathbf{T}_{\mathrm{ABLE}}$ 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917—Continued.

	Tak	en up	as—			D	isposit	ion.			days
Diagnoses.	Remaining from last year.	Admitted.	Readmitted.	Duty.	Diagnosis changed.	Died.	Invalided from service.	Ran.	Transferred.	Continued to next year.	Number of sick this year,
INJURIES—Continued.	0										
Vound, lacerated, knee, "J" (Class XX, Inter. 186) Vound, lacerated, knee, "K" (Class XX, Inter. 186) Vound, lacerated, knee, "L" (Class XX, Inter. 186) Vound, lacerated, knee, "F"		6	2 1 1	3				 	1 3		3 1
Vound, lacerated, leg, "F" (Class XX, Inter. 186) Vound, lacerated, leg, "G" (Class XX, Inter. 186)		53	17	1 56	••••				11	3	29
(Class XX, Inter. 186)	1	9	5	10	1				. 3	1	32
Vound, lacerated, leg, "I" (Class XX, Inter. 186)		6	2	6	1				1		8
(Class XX, Inter, 186) Vound, lacerated, leg, "L" (Class XX, Inter, 186) Vound, lacerated, mouth, "G" (Class XX, Inter, 186)	2	5 48	18	6 47	4		1		12	4	3
Vound, lacerated, mouth, "G" (Class XX, Inter. 186) Vound, lacerated, mouth, "GR" (Class XX, Inter. 186)		5	1	. 6							
Class XX. Inter. 186)		1		1							
Yound, lacerated, mouth, "J"		3		2					1		•
Vound, lacerated, mouth, "L" (Class XX, Inter. 186) Vound, lacerated, multiple, "A" (Class XX, Inter. 186).		10		9					1		
Vound, lacerated, multiple, "E" (Class XX, Inter. 186). Vound, lacerated, multiple, "F"			1						1		
(Class XX, Inter. 186)		6		5 A	,				5	1	
(Class XX, Inter. 186) Yound, lacorated, multiple, "H" (Class XX, Inter. 186) Yound, lacorated, multiple, "I"		1		1							
Vound, lacerated, multiple, "J" (Class XX, Inter. 186) Vound, lacerated, multiple, "L" (Class XX, Inter. 186)		1		1				,			
Vound, lacerated, neck, "E" (Class XX, Inter. 186) Vound, lacerated, neck, "GU" (Class XX, Inter. 186)		1		1							•
(Class XX, Inter. 186)		1		1		ļ					- 10
vound, lacerated, nose, "F"	1	1		1							
(Class XX Inter 186)		5	1	5					1		20
Yound, lacerated, nose, "H"		1		2							
Vound, lacerated, nose, "L" (Class XX, Inter. 186) Vound, lacerated, penis, "J" (Class XX, Inter. 186)		3		3					2		
Vound, lacerated, rectum, "1."		1		1							
(Class XX, Inter. 180) Vound, lacerated, scalp, "B" (Class XX, Inter. 186) Vound, lacerated, saclp, "F" (Class XX, Inter. 186)		1		1							
Vound, lacerated, sacip, "F" (Class XX, Inter. 186)		1	2	2					1		1

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Table 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917—Continued.

9 9	Take	en up a	is—			Di	spositi	on.			days
Diagnoses.	ng from	-	ed.		Diagnosis changed.		from ice.		ed.	d to next ur.	Number of sick
	Remaining f last year.	Admitted.	Readmitted	Duty.	Diagnosi	Died.	Invalided service	Ran.	Transferred.	Continued to next year.	Number
INJURIES—Continued.											
ound, lacerated, scalp, "GR" (Class XX, Inter. 186)		2		2							
ound, lacerated, scalp, "H" (Class XX, Inter. 186)		9	1	8					2		
Class XX, Inter. 186). Class XX, Inter. 186). ound, lacerated, scalp, "J" Class XX, Inter. 186).		9	1	9					1		
Class XX, Inter. 186)		3		3							
Class XX, Inter. 186)		2	1	1					1	1	
oound, lacerated, scalp, "K" Class XX, Inter. 186) ound, lacerated, scalp, "L" Class XX, Inter. 186)		98	18	95					18	3	
Class XX, Inter. 186)		1		1							
Class XX Inter 186)		1			1						
ound, lacerated, shoulder, "L" Class XX, Inter. 186)		3		2	1						
ound, lacerated, shoulder, "L" Class XX, Inter, 186) ound, Jacerated, thigh, "G" Class XX, Inter, 186) ound, Jacerated, thigh, "H" Class XX, Inter, 186) ound, Jacerated, thigh, "P" Class XX, Inter, 186) ound, Jacerated, thigh, "L" ound, Jacerated, thigh, "L"		4	3	6					1		
ound, lacerated, thigh, "H" Class XX, Inter 186)		2	2	3					1		
ound, lacerated, thigh, "I"		3	_	3					-		
ound, lacerated, thigh, "L" Class XX, Inter. 186).		6	5	7					3	1	
ound, lacerated, toe, "G" Class XX, Inter. 186)			0	1						1	
ound, lacerated, toe, "H" Class XX, Inter. 186)		1		1							,
ound, lacerated, toe, "I" Class XX, Inter. 186)		1		10							
ound, lacerated, toe, "J" Class XX, Inter. 186)		10	•••••	10					•••••	•••••	
Class XX, Inter. 186) ound, lacerated, toe, "L" Class XX, Inter. 186)		3		3			•••••		,	•••••	
Class XX, Inter. 186)ound, lacerated, unqualified,		12	3	12	3			••••••			
'B'' (Class XX, Inter. 186) ound, lacerated, unqualified,		1								1	
"E" (Class XX, Inter. 186) ound, lacerated, unqualified.	1	, 1		2							
'F'' (Class XX, Inter, 186)		3	2	2	1				2		
'G'' (Class XX, Inter. 186)		27	5	27					5		
'GR'' (Class XX, Inter. 186).		1		1							
"H" (Class XX, Inter. 186)	. 1	23	2	22					4		
"I" (Class XX, Inter. 186)		21	. 2	22	1						
'J'' (Class XX, Inter. 186)		5		5							
'K" (Class XX, Inter. 186)		1		1							
"L" (Class XX, Inter. 186)	. 1	87	15	87	2				11	. 3	
ound, lacerated, wrist, "A" (Class XX, Inter. 186)		1	1		1				1		
ound, lacerated, toe, "L" (Class XX, Inter. 186) "B" (Class XX, Inter. 186) ound, lacerated, unqualified, "B" (Class XX, Inter. 186) ound, lacerated, unqualified, "E" (Class XX, Inter. 186) ound, lacerated, unqualified, "G" (Class XX, Inter. 186) ound, lacerated, unqualified, "G" (Class XX, Inter. 186) ound, lacerated, unqualified, "H" (Class XX, Inter. 186) ound, lacerated, unqualified, "I" (Class XX, Inter. 186) ound, lacerated, unqualified, "I" (Class XX, Inter. 186) ound, lacerated, unqualified, "K" (Class XX, Inter. 186) ound, lacerated, unqualified, "L" (Class XX, Inter. 186) ound, lacerated, unqualified, "L" (Class XX, Inter. 186) ound, lacerated, unqualified, "L" (Class XX, Inter. 186) (Class XX, Inter. 186) (Class XX, Inter. 186) (Class XX, Inter. 186) ound, lacerated, wrist, "G" (Class XX, Inter. 186) (Class XX, Inter. 186) ound, lacerated, wrist, "H" (Class XX, Inter. 186) (Class XX, Inter. 186) ound, lacerated, wrist, "H" (Class XX, Inter. 186) (Class XX, Inter. 186)		. 2	1	1					. 1	1	
ound, lacerated, wrist, "H" (Class XX, Inter. 186)		. 6		6							
ound, lacerated, wrist, "L" (Class XX, Inter. 186)		8		8					i	1	
ound, punctured, abdomen, "B" (Class XX. Inter. 171)				1							
ound, punctured, abdomen, "G" (Class XX, Inter. 171)									1		

Table 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917—Continued.

	Tak	en up a	as—			Di	spositi	on.	,		days
Diagnoses.	Remaining from last year.	Admitted.	Readmitted.	Duty.	Diagnosis changed	Died.	Invalided from service.	Ran.	Transferred.	Continued to next year.	Number of sick this year.
INJURIES—Continued.											
Wound, punctured, abdomen, "L" (Class XX, Inter. 171) Wound, punctured, ankle, "J" (Class XX, Inter. 171) Wound, punctured, arm, "F"		1 2	2	1 2					1	1	44 17 13
(Class XX, Inter. 171) Wound, punctured, arm, "L." (Class XX, Inter. 171) Wound, punctured, back, "B" (Class XX, Inter. 171)	1	7		7	1		,				24 3
Wound, punctured, back, "L" (Class XX, Inter. 171). Wound, punctured, chest, "A" (Class XX, Inter. 171). Wound, punctured, chest, "B" (Class XX, Inter. 171).		. 1 1	1 2 1	1	1				1 1	1	6 · 15 5
Wound, punctured, chest, "L" (Class XX, Inter. 171) Wound, punctured, ear, "L" (Class XX, Inter. 171)		1 2		1 2							1
Wound, punctured, eye, "F" (Class XX, Inter. 171) Wound, punctured, eye, "H" (Class XX, Inter. 171) Wound, punctured, eye, "J" (Class XX, Inter. 171)		1					1		1		
Wound, punctured, eye, "L" (Class XX, Inter. 171) Wound, punctured, finger, "E" (Class XX, Inter. 171) Wound, punctured, finger, "H"	,	7	5	5					6	1	150 21
Wound, punctured, finger, "I" (Class XX, Inter. 171) Wound, punctured, finger, "L" (Class XX, Inter. 171)		1 1 8		1 1 7						1	36 79
(Class XX, Inter. 171) Wound, punctured, foot, "G" (Class XX, Inter. 171)		1		1					1		11
Wound, punctured, foot, "H" (Class XX, Inter. 171)		2		2 2					1		32
(Class XX, Inter. 171)		77	. 8	78						1	15
Wound, punctured, hand, "G", (Class XX, Inter. 171). Wound, punctured, hand, "H", (Class XX, Inter. 171). Wound, punctured, hand, "L"		2		. 2							11 56
(Class XX, Inter. 171)		. 15	. :	1 13 1 1						1	11
(Class XX, Inter. 171) Wound, punctured, leg, "L"		12		3 20) 1					1	16
Wound, punctured, multiple, "L" (Class XX, Inter. 171) Wound, punctured, rectum, "G (Class XX, Inter. 171)	,		2	. 1						1	. 7

TABLE 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917—Continued.

	Take	n up a	as—			D	Disposit	ion.		4	doge	de y
	from 1r.		ri		Diagnosis changed.		from fre.		d.	Continued to next	T.	Number of stor this year.
Diagnoses.	ing yea	ed.	itte		osis (ded		ferre	onec	уев	th
	Remaining f last year.	Admitted.	Readmitted	Duty.	agno	Died.	Invalided service.	Ran.	Transferred.	ntin		
	Rer	Adi	Re	Dn	Di	Di	H	E E	E	1 2	1	Z
				1	-		-	-			_	
INJURIES-Continued.												
Wound, punctured, rectum, "L' (Class XX, Inter. 171)		2			2							3
Wound, punctured, scalp, "L"			. 1		1							1
Wound, punctured, thigh, "F"			1		1							14
(Class XX, Inter. 171)			5 2		4					2	1	80
Wound, punctured, thigh, "L" (Class XX, Inter. 171) Wound, punctured, throat, "L" (Class XX, Inter. 171) Wound, punctured, toe, "L" (Class XX, Inter. 171) Wound, punctured, unqualified, "A" (Class XX, Inter. 171) Wound, punctured, unqualified			1		1							1
(Class XX, Inter. 171)					1	1					,	2
(Class XX, Inter. 171)			1		1					1		20
"A" (Class XX, Inter. 171)	-		1 1		1					1		23
"B" (Class XX, Inter. 171)			1 1		1					1		
"E" (Class XX, Inter. 171)			1		1							22
Wound, punctured, unqualmed		-	2		2				• • •	1		
Wound, punctured, unqualified		-	2	ı	1					2		78
Wound, punctured, unqualified	,		1	- 1	1							24
"A" (Class XX, Inter. I71) Wound, punctured, unqualified "B" (Class XX, Inter. I71) Wound, punctured, unqualified "E" (Class XX, Inter. I71) Wound, punctured, unqualified "G" (Class XX, Inter. I71) Wound, punctured, unqualified "H" (Class XX, Inter. I71) Wound, punctured, unqualified "I" (Class XX, Inter. I71) Wound, punctured, unqualified "I" (Class XX, Inter. I71)	,	1	19	1	20			1		3.		339
POISONS.												
Botulism, "L" (Class XX	Ι,		4	1	4		1					13
Inter. 164)	ī,	-		1	3							3
Inter. 164) Insect sting, "L" (Class XX	i.		3	-	1					3 .		122
Inter. 165A)	,,-		21	3	20	1						1
Poison, cocaine anesthesia, "L (Class XXI, Inter. 168B)			1	-	1							
Poison, nitrous oxide-oxyge ether, anesthesia, "L" (Cla XXI, Inter. 168B)	SS		1				1					
XXI, Inter. 168B) Poison, acid hydrocyanic, acut	е,		1				1					
"A" (Class XXI, Inter. 165)	3),.		1	27	262	9			1	82	2	1,224
(Class XXI, Inter. 56)	;;;	6		97			1	3		11	1	289
XXI, Inter. 168B). Poison, acid hydrocyanic, acut "A" (Class XXI, Inter. 165) Poison, alcohol, acute, "I (Class XXI, Inter. 56) Poison, alcohol, chronic, "I (Class XXI, Inter. 56) Poison, arsenic (salvarsan), acut	ite.		21	15	19	1	1	0				
" Close XXI Inter. 165	B)		1				1			1	4	2
Poison, carbon monoxide, acu "L" (Class XXI, Inter. 168) Poison, chloral, acute, "I			1	1			1				.,,	5
Class XXI Inter, 59)			2		2							
Poison, cocaine, acute, "Class XXI. Inter. 59)			1	1			1			1		32
(Class VVI Inter 59)			5	3	4	2 .		1 -		1		
Poison, cocame, chronic,	L"		8	5	3	1 -		3 -		6		- 182
Poison, cyanide gas, acute, "	L"			1	1							- 8
Poison, ether, acute, "A" (Cl	ass		1	1	1	-				1		- 18
(Class XXI, Inter. 59). Poison, cyanide gas, acute, (Class XXI, Inter. 168) Poison, ether, acute, "A" (Cl. XXI, Inter. 168) Poison, fish, acute, "L" (Cl. XXI, Inter. 164) Poison, food, animal, acute, "	ass		20	3	20		1.			2	2	. 95
XXI, Inter. 164)	Ľ"			6	82						8	20
(Class XXI, Inter. 164) Poison, food, vegetable, act "L" (Class XXI, Inter. 16			82	9	201.0		i	- 1		1	1	

TABLE 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917—Continued.

* - 4	Take	n up a	s-			Dis	spositi	on.			days
Diagnoses.	Remaining from last year.	itted.	Readmitted.		Diagnosis changed		Invalided from service.	•	Transferred.	Continued to next year.	Number of sick this year.
	Rema	Admitted	Read	Duty.	Diag	Died.	Inva	Ran.	Tran	Cont	Nun
POISONS—Continued.			·								
Poison, gasoline (inhaled), acute, "L" (Class XXI, Inter. 168). Poison, heroin, acute, "L" (Class		11	3	11			1		1	1	47
		3	3	1		1	1		3		49
Poison, heroin, chronic, "L" (Class XXI, Inter. 59)		11	. 9	3			7		9	1	196
"A" (Class XXI. Inter. 168).		3	1	. 1		2				1	
Poison, illuminating gas, acute, "L" (Class XXI, Inter. 168)		4	2	2		3			1		10
Poison, kerosene, acute, "L"		7	4	5					6		7
(Class XXI, Inter. 165B) Poison, kerosene, chronic, "L" (Class XXI, Inter. 165B)		4		5					3		13
Poison, lead, acute, "L" (Class XXI, Inter. 165B)									2		24
XXI, Inter. 165B)	. 1	19		22					0		40
X X I Inter 571	- 1	21	14	26			1		9		
Poison, marsh gas (bilge), acute, "L" (Class XXI, Inter. 168). Poison, mercuric chloride, acute,		1		1							
"A" (Class X X 1, Inter. 165 B)		5	4	4		2			3		5
Poison, mercuric chloride, acute "L" (Class XXI, Inter. 165B)		. 8	2	4		1			4	1	. 3
Poison, morphine, acute, "L"		4	4	2	1				5		10
Poison, opium, acute, "A" (Class XXI, Inter. 59) Poison, opium, acute, "A" (Class XXI, Inter. 59)		15	8	5	1		6			3	25
Poison, opium, acute, "A" (Clas	S	1		1		1					
XXI, Inter. 59)	s	İ	1			1					6
Poison, opium, chronic, "L"		. 3				. 1				1	
	;- 2	2 2	2 1	1			. 2				
Poison, Paris green, acute, "L' (Class XXI, Inter. 165B)		. 1	1 1						1	1	1
Poison, phenol, acute, "A" (Class XXI, Inter. 165B) Poison, phenol, acute, "L" (Class		. :	3	2		. 1					
Poison, phenol, acute, "L" (Clas XXI, Inter. 165B)	S		1			. 1					
Poison, ptomaine, acute, "L' (Class XXI, Inter. 164)	,	1	8 5	20)				. :	3	
Poison, serum (antidiphthe ritic), acute, "L" (Class XXI	-										
Inter 165 B)	1	-	1				1				
Poison, snake venom, acute, "L (Class XXI, Inter. 165A) Poison, strychnine, acute, "A"			1	. 1	ı						
Poison, strychnine, acute, "A"	"		1				1				
Poison, strychnine, acute, "A" (Class XXI, Inter. 165B) Poison, strychnine, acute, "L" (Class XXI, Inter. 165B)	;;		1			1				1	
Poison, tobaceo, chronic, "L' (Class XXI, Inter. 59)	;;										1
Poison, unqualified, acute, "A"	,;-	-	1								
(Class XXI, Inter. 165B) Poison, unqualified, acute, "L (Class XXI, Inter. 165B)	,;-						1			3	
(Class XXI, Inter. 165B)		. 8	5 2	0 7	9	6			- 2		- 3
Poison, zinc, acute, "L" (Clas XXI, Inter. 165B)		-	1	1							
FEMALE DISEASES.											
Abortion (Class XXII, Inte	r.										
Amenorrhea (Class XXII, Inte			1	-	1				-		1
130B)			1	-	1						-
XXII, Inter. 130B)				1	1						-1

TABLE 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1917—Continued.

	Tak	en up	as	13		Di	spositi	on.			days
Diagnoses.	Remaining from last year.	Admitted.	Readmitted.	Duty.	Diagnosis changed	Died.	Invalided from service.	Ran.	Transferred.	Continued to next year.	Number of sick this year.
FEMALE DISEASES—Contd.											
Dysmenorrhea (Class XXII, Inter. 130B) Endometritis, acute (Class XXII, Inter. 130A) Fibroma of uterus (Class XXII,		50	1	50					1		91
Inter 129). Menorrhagia (Class XXII, Inter. 128). Pregnancy (Class XXII, Inter. 134\).		1		1							4
Salpingitis, acute (Class XXII, Inter. 132)		1								1	

SUMMARY.

Summary and comparative rates with previous years.	Entire service, calendar year 1917.	A verage entire service, 10 years, 1907–1916.
Average complement. Number of cases treated (Rem, A and RA). Rate per 1,000 of complement. Deaths. Rate per 1,000 of complement. Invalided from service. Rate per 1,000 of complement. Total number of sick days. Rate per 1,000 of complement.	1,072 4.36 5,063 20.61 1.954,278	60,849 53,677 882.13 295 4.84 1,453 23.87 634,148 10,421.66

DISTRIBUTION AMONG OCCUPATIONAL GROUPS.

Table 2.—Table showing distribution of diseases and injuries among occupaand admission rates, deaths and death rates, invalided from service and inva-

	* 10 m	Offic	ers.		Artifi	cers.		Miscella	
lass No.	Class.	Navy and marine.	Mid- ship- men.	Elec- tri- cians.	En- gine room.	Fire room.	All others.	Cleri- cal.	Culi- nary.
	Average complement	14, 104	3, 315	7,537	12, 888	41,722	6, 336	5, 152	13,750
1	Diseases of blood			5 0.66	0. 31	6 0.14		3 0.58	0.14
2	Rate per 1,000 Diseases of circulatory system.	30		23	56	153	16	6.40	53 3.88
3	Rate per 1,000 Disease of digestive system Rate per 1,000 Diseases of ductless glands	$ \begin{array}{r} 2.12 \\ 741 \\ 52.53 \\ 5 \end{array} $	0. 60 677 204. 22	3. 05 622 82. 52 2	4.34 972 75.41 6	3, 66 3, 411 81, 75 19	500 78.91	674 130. 82 4	901 65. 52
5	and spleen. Rate per 1,000. Diseases of ear. Rate per 1,000.	0.34	13	0. 26 52	0. 46 68	0. 45 348 8. 34	43	0.77 31 6.01	0.07 45 3.27
6	Rate per 1,000 Diseases of eye and adnexa Rate per 1,000 Diseases of genito-urinay	1.70 70 4.97 64	3.92 200 60.30 28	6. 89 57 7. 56 132	5. 27 72 5. 58 163	262 6.27	6.31	76 14.75	3. 4. 3. 4. 15.
7	system (nonvenereal). Rate per 1,000 Diseases of infective type	4. 53 1, 015	8.44	17.51 1,086	12.64	12.91	11.52	16.69	11. 0 1, 50
9	(nonvenereal). Rate per 1,000 Diseases of infective type	71.96 74	425.03 6	144.08 542		171. 56 4, 850			$109.3 \\ 1,40$
10	(venereal). Rate per 1,000 Diseases of lymphatic system.	5. 24 19	1.80 7	71.91 22	85. 04 45	202	32	16	102. 1 4 2. 9
11	Rate per 1,000 Diseases of mind Rate per 1,000	1.34 18 1.27		2.91 12 1.59	34	190	3.47	25 4.85	3.3
12	Rate per 1,000	2.62	7 2.11	63 8.35	94 7. 29	366 8.77	9.62	6.79	6.3
13 14	Diseases of nervous system Rate per 1,000 Diseases of respiratory sys-	108 7.65 339	12.36	5.30	6.75	5.87	7.28	12.81	4.4
15	tem. Rate per 1,000 Diseases of skin, hair, and	24.03 46							22.7
16	nails. Rate per 1,000	3. 26 26	11.76	44	76	188	32	2 42	4
17	Rate per 1,000 Miscellaneous diseases and conditions.	1. 84 132	99	85	208	57	118	3 166	. 19
18	Rate per 1,000 Parasites Rate per 1,000	1.63	134 40.42	6.89	4.90	195	2 19	6.59	7.1
. 19	Rate per 1,000.	0.63	1.50	1.99	0.77	0.9	5 1.20 8 34	1.94 7 166	0.3
20 21	Rate per 1,000. Poisons Rate per 1,000. Female diseases	21.83	61.53	33.16	50.85	2 49.3 1 13	2 54.70	32. 22 2 27	1 3
22	Rate per 1,000 Female diseases	2.20	0.30	2.9.				. 57	
23	Total for all classes Rate per 1,000	3, 120	2,974				3 2,94 5 464.6		
24	Deaths	3.5	0.30	5.4	3 4.8	1 4.0	7 3.6		2.
25	Rate per 1,000	0.49		0.1	3 0.1	5 0.1	9 0.1	5 0.38 6 118	3 0. 3 2
26 27 28	Total sick days	5.00 55,98 214.0	16, 13	. 17.3 63.25	8 17.0 3 84.89		0 18.3 4 47,81	0 22.90 8 47.88	16. 5 90, 1

74. 7. 9 3. 7. 7. 24. 50. 39 24. 4. 89 5. 1. 02. 150. 30. 60. 18. 3. 67.

3,839 16 783.30 50 24 4.89 2 0.61 0.148 3 30.19 17

 $\begin{array}{c} 0.61 & 0.\\ 148 & 5\\ 30.19 & 17.\\ 69,225 & 243,0\\ 275.58 & 992. \end{array}$

DISTRIBUTION AMONG OCCUPATIONAL GROUPS.

tional groups of the personnel for the calendar year 1917, by classified admissions lided rates, suicides and suicide rates, sick days, and the computed damage.

	orce o	ontinue	d.	Sear	nen bra	nch.		Totals fo	or all occi	upations.		
Hos- pital.	Ma- rines.	Musi- cians.	Pris- oners.	Apprentices.	Ord- nance.	All others.	Num- ber.	Deaths.	Inva- lided from serv- ice.	Sick days.	Dam- age.	Class No.
4,901	33, 256	7,056	2,808	10, 489	7,574	74,692	245, 580					
20	10 0.30 127		i	5 0.47 161		16 0. 21 266	51 0. 20 967	0.008	0.02		7.85	
4.07	3.81	2.12	0.35	15.34	1.45	3.56	3.53	0.15	1:89			
706 144. 05 5		269 38. 12 1	94.37	2, 149 204. 88 14	33.66	7, 319 97, 98 26	21, 965 89, 44					
1.02	0.21	0.14	0.35	1.33		0.34	0.37		0.21			
12.65	6. 91	18 2. 55	9.97	360 34,32	3.43	628 8.40	1,976 8,04	0.004	336 1.36			
35 7.14 117	191 5. 74 390	1. 27 44	4.98	152 14.49 600	3.69	6.98	7,775 7,22 3,464	16	281 1.14 224		222. 98 270. 38	
23.81 1,634	11.72 5,247	6. 23 418	9. 25 208	57. 20 7, 846	5.41	13.50	14.10 44,706	0.06	0. 91		2, 344. 55	
333.40 224		59. 24 225	74. 07 102	748. 02 1, 673	40. 92	183.98 6,570	182.04 21,786	0.85	2.13 169		717.09	
45.70	112. 25	31.88	36.68	159.50	40.79	87. 96	88. 71	0.01	0.68			
6. 73 29	203 6.10	10 1. 41	3.20	6.38	2.11	264 3.53	4.01		0.004			1
5. 91 52	119 3. 57 285	0. 99 15	6. 05 20	199 18. 97 264	1.18 14	247 3.30 710	976 3. 97 2, 110	0.03	2. 62 797		431.48 528.48	1
10.61 34	8.56 194	2.12	7.12	25.16 171	1.84 16	9.50 401	8.59 1,538	0.01 62	$\frac{3.24}{520}$	45, 823	415. 27	1
6. 93 367	5.83 1,067	1.11	7. 12 43	16.30 1,745	$\frac{2.11}{64}$	5.36 2,782	6.26 9,390	0. 25 265	2.11 166	159,132	649.55	1
74.88 39	32.08 315	14.03 14	15.31 28	166.36 137	8.45 12	$37.24 \\ 422$	38.23 $1,495$	1.07 1	0.67 29	23,306	77.84	1
7.95	9.47 118	1.98 16	9.97	13.06 266	1.58 20	5.64 320	6.08	0.004	0.11 203	40,991	212.91	1
7. 75 247	3. 54 310	2. 26 35	3. 20 2)	25.35 683	2. 63 29	4. 28 861	5. 04 3, 773	4	0.82 252	71,863	323.18	1
50.39 24	9.32 285	4.96	10.32 31	65.11 238	3.82 17	11.52 402	15.36	0.01	1.02	20,238	57. 22	18
4.89	8. 56 34	3.81	11.03	22. 69 12	2. 24	5.38	1,640 6.67 219	0.008	0.008	5, 220	24.06	1
$\frac{1.02}{150}$	$\frac{1.02}{1,306}$	$0.56 \\ 58$	0.35 70	$\frac{1.14}{522}$	0.66 203	0.74 $3,775$	0.89	$0.05 \\ 387$	0. 03 204	160,934		2
30.60	39. 27 134	8.21	24.92	49. 76 13	26.80 15	50. 54 150	42. 67 675	1. 57. 23	0.83	4,474	35.36	2
3.67	4.02	0.85	1.42	1.23	1.98	2.00		0.09	2	128	1.22	2
3,839 783.30	16,809 505.44	1,298 183.95	926	17, 277 1, 647. 24	1,400 184.84	40, 488 542. 06	131,357 534.88	1,072 4.36	- 5,063	1,954,278	8, 409. 71	2
24	83	5	3	223	34	298	1,072					24
4.89	2.49	0.70	1.06	21.26 1	4.48	3.98 9	4.36					2
0.61	0. 24 572	57	18	0.09 1,052	0.66	0.12 $1,418$	0.19 5,063					26
30. 19 69, 225 2	17.19 243,006 992.69	8. 07 19, 911	6. 41 17, 160	100. 29 319, 540	3. 03 26, 746	19.38 532,827 1	, 954, 278					25

DEATHS.

Table 3.—Casualties in the Navy and Marine Corps during the calendar year 1917.

		Nav	y.	Mar	ine.
Cause.	Number.	Officers.	Men.	Officers.	Men.
DISEASE.		A Consti			
bscess of brain bscess of kidney bscess of liver bscess of lung erogenes capsulatus infection.	. 3		3		
bscess of kidney	1		1		
bscess of liver	1 3		1		
bscess of lung	1		1		
neurysm	i		i		
ngina pectoris	2	2			
ppendicitis, acute	8	1	7		
ngina pectoris. ppendicitis, acute. rterial sclerosis, general.	1	1	3		
rthritis, acutetrophy of liver, acute yellow	3		1		
	Q	2	6		
arcinoma. erebro-spinal fever. holangitis, acute. holecystitis, acute. holecystitis, chronic. extits.	112	2	106		2
helangitis acute	1		1		
holecystitis, acute	2		2		
holecystitis, chronic	1		1		
vstitis, chronic (nonvenereal).					-19.1
ementia, paralytica	5 2	1 1	4 1		
	4	1	3		
Madetes mentus	8		6		
villaters mellitus. Dilatation, acute cardiac. Dilatation of stomach, acute.	1		1		
Diphtheria	3		3		
liphtheria ysentery, entameble dema of lung. mbolism.	1				1000000
Idema of lung	2	·····i	2		
mbolism	2		5		
Indocarditis, acute	5 2	1	1		
mbolism ndocarditis, acute. nteritis, acute. nteritis, chronic. pilepsy.	1	1	1		
milener	i		i		
			1		
oreign body in bronchus	1		1		
Oreign body in bronchus. Oreign body in trachea. Lonococcus infection, unqualified	1		1		
lonococcus infection, unqualified	1		1		
teart block	$\frac{1}{2}$		1 2		
Hemorrhage into cerebrum	1		1		
Hemorrhage, subdural Hydronephrosis	Î		î		
nfluenza	. 1		1		
nifluenza jeukemia	1		1		
Aalaria	. 0		2		
Astoiditis, acute	1 5		5		
Astoiditis, acute. Aeasles. Meningitis, cerebral. Meningitis, cerebro-spinal. Meningitis, snipal	1 12	3	8		
Meningitis, cerebro-spinal	39	2	34		
Meningitis, spinal	1		1		
Myelitis, transverse. Myecarditis, acute. Myecarditis, chronic.	. 1				
Myocarditis, acute	. 5	3	4		. ,
Myocarditis, chronic	. 5	3	2 4		
			2		
Nephritis, chronic interstitial Nephritis, chronic parenchymatous. Obstruction, acute intestinal	. 6	1	5		
Obstruction, acute intestinal	. 5		5		
Paraplegia, ataxic	. 1		1		
			1		
Pempigus Peritonitis, acute general Pieurisy, chronic fibrinous.	. 4		4		
Pieurisy, chronic fibrinous	1				•
Pleurisy, serofibrinous. Pleurisy, suppurative Pneumonia, broucho Pneumonia, interstitial	. 52		52		
Pneumonia, broncho	67	1	63		
Pneumonia, interstitial	. 1		1		
			127		
Poliomyelitis, acute bulbar	1		1		
Poliomyelitis, acute bulbar Psychosis, manic depressive Purpura, hemorrhagic	1		The state of		
Phonymetic fover sente	1		1		
Rheumatic fever, acute Sarcoma	5		4		
JULY (/III.W	. 5		. 4		
Scarlet fever			The same of the latest and the lates		A LONG LAND
Scarlet feverSclerosis, disseminated	. 1				
Searlet fever. Sederosis, disseminated. Senticemia	1 14				
Scarlet feverSclerosis, disseminated	14				

Rupture, Smoke inh Strangulat Strangulati Wound, gun Wound, gun Wound, gun

DEATHS—Continued.

Table 3.—Casualties in the Navy and Marine Corps during the calendar year 1917—Continued.

Tuberculosis, acute broncho-pneumonie Tuberculosis, acute general Tuberculosis, acute pneumonie Tuberculosis, acute pneumonie Tuberculosis, acute and pulmonary miliary. Tuberculosis, chronic pulmonary Tuberculosis, unqualified Tuberculosis meningitis Typhoid fever Ulcer of duodenum	272	INS	avy.	M	arine.
Thrombosis Trichiniasis Tuberculosis, acute broncho-pneumonic Tuberculosis, acute general Tuberculosis, acute pneumonic Tuberculosis, acute and pulmonary miliary Tuberculosis, chronic pulmonary Tuberculosis, unqualified Tuberculosis unqualified Tuberculosis meningitis Typhoid fever Ulcer of duodenum Ulcer of stomach Valvular disease, chronic cardiac Total for diseases INJURIES Avulsion, arm, "F" Avulsion, arm, "F" Avulsion, arm, "I" Burns, multiple, extreme, "FS" Burns, multiple, extreme, "L" Crush, chest, "I" Crush, skull, "I" Drowning, "A" Drowning, "D" Crowney Tuberculosis Total for diseases 1052 662 1053 663 1054 1054 1055 1	ы.	Officers.	Men.	Officers.	Men.
Tuberculosis, acute broncho-pneumonic Tuberculosis, acute general Tuberculosis, acute pneumonic Tuberculosis, acute pneumonic Tuberculosis, acute and pulmonary miliary Tuberculosis, chronic pulmonary Tuberculosis unqualified Tuberculosis unqualified Tuberculosis meningitis Typhoid fever Ulcer of duodenum Ulcer of stomach Valvular disease, chronic cardiae Total for diseases INJURIES. Avulsion, arm, "F" Avulsion, arm, "H" Surns, multiple, extreme, "FS" Burns, multiple, extreme, "L" Crush, chest, "I" Crush, chest, "I" Crush, skull, "I" Dislocation, vertebra, "J" Drowning, "A" Drowning, "D" Towning, "D" Towning, "D" Towning, "D" Towning, "D" Towning, "D"					
Tuberculosis, acute general Tuberculosis, acute general Tuberculosis, acute pneumonic Tuberculosis, acute pneumonic Tuberculosis, acute and pulmonary miliary Tuberculosis, unqualified Tuberculosis, unqualified Tuberculosis meningitis Typhoid fever Ulcer of duodenum Ulcer of stomach Valvular disease, chronic cardiac Total for diseases INJURIES Avulsion, arm, "F" Avulsion, arm, "H" Avulsion, arm, "H" 11 Burns, multiple, extreme, "FS" Burns, multiple, extreme, "FS" 22 Crush, multiple, extreme, "FS" 13 Crush, skull, "I" 23 Drowning, "A" 15 Drowning, "D" 16 16 17 18 18 18 18 18 18 18 18 18 18 18 18 18	1		. 1		
Tuberculosis, acute pneumonic Tuberculosis, acute pneumonic Tuberculosis, acute and pulmonary miliary. Tuberculosis, chronic pulmonary Tuberculosis, unqualified Tuberculosis, unqualified Tuberculosis meningitis Typhold fever Ulcer of duodenum Ulcer of stomach Valvular disease, chronic cardiac Total for diseases INJURIES. Avulsion, arm, "F". Avulsion, arm, "H". Avulsion, arm, "H". Insurantiple, extreme, "FS". Burns, multiple, extreme, "FS". Surnsh, multiple, extreme, "FS". Insurantiple, extreme, "FS".	1		. 1		
Tuberculosis, unqualified. Tuberculosis meningitis Typhold fever. Ulcer of duodenum Ulcer of stomach. Valvular disease, chronic cardiac Total for diseases. INJURIES. Avulsion, arm, "F". Avulsion, arm, "H". Avulsion, arm, "H". Insurantiple, extreme, "FS". Burns, multiple, extreme, "FS". Surns, multiple, extreme, "FS". Insush, chest, "I". Insush, multiple, extreme, "FS". Insush, multiple, extreme, "FS". Insush, multiple, extreme, "FS". Insush, multiple, extreme, "FS". Insush, skull, "I". Insush, skull, "I". Insush, wertebra, "J". Insush, multiple, extreme, "FS".	5		. 4		
Tuberculosis, unqualified. Tuberculosis meningitis Typhold fever. Ulcer of duodenum Ulcer of stomach. Valvular disease, chronic cardiac Total for diseases. INJURIES. Avulsion, arm, "F". Avulsion, arm, "I". Jurns, multiple, extreme, "FS". Jurns, multiple, extreme, "E". Trush, chest, "I". Jush, multiple, extreme, "FS". Jush, multiple, extreme, "FS". Jush, multiple, extreme, "FS". Jush, multiple, extreme, "FS". Jush, skull, "I". Jush, chest, "I". Jush, multiple, extreme, "FS".	1		1 2		
Tuberculosis, unqualified. Tuberculosis meningitis Typhold fever. Ulcer of duodenum Ulcer of stomach. Valvular disease, chronic cardiac Total for diseases. INJURIES. Avulsion, arm, "F". Avulsion, arm, "H". Avulsion, arm, "I". Burns, multiple, extreme, "FS". Burns, multiple, extreme, "L". Trush, chest, "I". Drush, multiple, extreme, "FS". 1 Strush, skull, "I". Dislocation, vertebra, "J". 1 Drowning, "A". 1 Drowning, "A". 1 Orowning, "D". 1 Orowning, "D".	3 2		2		-
Valvular disease, chronic cardiac Total for diseases. 662 INJURIES. Avulsion, arm, "F". Avulsion, arm, "H". Avulsion, arm, "I". Burns, multiple, extreme, "FS". 8 Burns, multiple, extreme, "L". Jrush, chest, "I". Jrush, skull, "I". Jrush, skull, "I". Jrush, cyrtebra, "J". 2 Drowning, "A". 1 Drowning, "A". 1 Crowning, "D". 1 Commission of the property	7	2	38		
Valvular disease, chronic cardiac Total for diseases. 662 INJURIES. Avulsion, arm, "F". 5 Avulsion, arm, "H". 1 Avulsion, arm, "I". 1 Jurns, multiple, extreme, "FS". 5 Jurns, multiple, extreme, "L". 4 Avulsion, arm, "I". 2 Jurns, multiple, extreme, "FS". 1 Jurns, multiple, extreme, "FS". 1 Jurnsh, multiple, extreme, "FS". 1 Jurnsh, skull, "I". 2 Justocation, vertebra, "J". 2 Justocation, vertebra, "J". 1 Jurnsh, "A". 5 Jurnsh,	1		1		
Valvular disease, chronic cardiac Total for diseases. 662 INJURIES. Avulsion, arm, "F". 5 Avulsion, arm, "H". 1 Avulsion, arm, "I". 1 Jurns, multiple, extreme, "FS". 5 Jurns, multiple, extreme, "L". 4 Avulsion, arm, "I". 2 Jurns, multiple, extreme, "FS". 1 Jurns, multiple, extreme, "FS". 1 Jurnsh, multiple, extreme, "FS". 1 Jurnsh, skull, "I". 2 Justocation, vertebra, "J". 2 Justocation, vertebra, "J". 1 Jurnsh, "A". 5 Jurnsh,	2		2		
Valvular disease, chronic cardiac Total for diseases. 662 INJURIES. Avulsion, arm, "F". Avulsion, arm, "H". Avulsion, arm, "I". Burns, multiple, extreme, "FS". 8 Burns, multiple, extreme, "L". Jrush, chest, "I". Jrush, skull, "I". Jrush, skull, "I". Jrush, cyrtebra, "J". 2 Drowning, "A". 1 Drowning, "A". 1 Crowning, "D". 1 Commission of the property	2		1		
Total for diseases. 669 INJURIES. Avulsion, arm, "F". 5 Avulsion, arm, "H". 1 Avulsion, arm, "I". 1 Burns, multiple, extreme, "FS". 8 Burns, multiple, extreme, "L". 4 Trush, chest, "I". 3 Trush, skull, "I". 2 Dislocation, vertebra, "J". 2 Drowning, "A". 6 Trowning, "A". 6 Trowning, "A". 6	4	·····i	2		
INJURIES. Avulsion, arm, "F". Avulsion, arm, "H" Avulsion, arm, "H" Burns, multiple, extreme, "FS". Burns, multiple, extreme, "L". Jrush, chest, "I" Jrush, chest, "I" Jrush, skull, "I" Jusiocation, vertebra, "J" Jrowning, "A" Jrowning, "A" Jrowning, "D" Jrowning,	7		6		
INJURIES. Avulsion, arm, "F". Avulsion, arm, "H". Avulsion, arm, "H". Burns, multiple, extreme, "FS". Burns, multiple, extreme, "L". Crush, chest, "I". Crush, multiple, extreme, "FS". 1 Urush, skull, "I". 2 Dislocation, vertebra, "J". Drowning, "A". 1 Drowning, "D". 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	-	-			
Avulsion, arm, "F". Avulsion, arm, "H". Avulsion, arm, "H". Avulsion, arm, "I". Burns, multiple, extreme, "FS". Burns, multiple, extreme, "L". Jrush, chest, "I". Jrush, skull, "I". Jislocation, vertebra, "J". Jislocation, vertebra, "J". Drowning, "A". 10 10 10 10 11 11 12 12 13 14 15 16 17 17 18 18 18 19 19 19 19 10 10 10 10 10 10	-	24	586		5
Avulsion, arm, "F" Avulsion, arm, "H" Avulsion, arm, "H" Avulsion, arm, "H" Burns, multiple, extreme, "FS" Burns, multiple, extreme, "L" Jrush, chest, "I" Jrush, chest, "I" Jrush, skull, "I" Jrush, skull, "I" Jrush, skull, "I" Jrowning, "A" Jrowning, "A" Jrowning, "B" Jrowning, "S" Jrowning		-			
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3urns, multiple, extreme, "L" 3 4 7 7 7 1 3 3 3 3 3 3 3 3 3			1		
Arush, chest, "1" Arush, multiple, extreme, "FS" Arush, skull, "1" Arush, skull, "1" Arush, skull, "1" Arush, skull, "1" Arush, skull, "1" Arush, skull, "1" Arush, skull, "1" Arush, skull, "1" Arush, "Drowning, "Drowning, "Drowning, "Drowning, "Drowning, "Drowning, "Drowning, "Drowning, "Drowning, "DR" Arush, "Drowning, "DR" Arush, "DR" Arush, "DR" Arush, "DR" Arush, "Crowning, "K" Arush, "Crowning, "K" Arush, "Crowning, "K" Arush, "Crowning, "K" Arush, "Crowning, "Cro	1	1	3		
Trush, skull, "I". 2 bislocation, vertebra, "J". 2 convertebra, "J". 3 convertebra, "J". 4 convertebra, "J". 5 convertebra, "L".	3 .		3		
Dislocation, vertebra, "J" 1 Drowning, "A" 6 Drowning, "D" 116 Drowning, "D" 116 Drowning, "D" 116 Drowning, "DR" 116 Drowning, "DR" 116 Drowning, "DR" 116 Drowning, "DR" 19 Drowning, "BS" 4 Sthaustion from heat, "L" 19 Exhaustion from overexposure, "K" 15 Exhaustion from overexposure, "K" 15 Exhaustion from overexposure, "L" 55 Tacture, compound, pelvis, "G" 1 Tacture, compound, skull, "B" 1 Tacture, compound, skull, "B" 1 Tacture, compound, skull, "GR" 1 Tacture, compound, skull, "GR" 1 Tacture, compound, skull, "GR" 1 Tacture, compound, skull, "HR" 1 Tacture, simple, skull, "B" 1	١.		ĭ		
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19		1	3		
2xhaustion from heat, "L"			19		
Exhaustion from overexposure, "K" 25		1	47		
xhaustion from overexposure, "L" 55			1		
racture, compound, pelvis, "G" racture, compound, ribs, "G" 1 racture, compound, ribs, "G" 1 racture, compound, skull, "B" 2 racture, compound, skull, "G" 5 racture, compound, skull, "G" 1 racture, compound, skull, "GR" 1 racture, compound, skull, "GR" 1 racture, compound, skull, "H" 1 racture, compound, skull, "H" 1 racture, compound, skull, "L" 1 racture, compound, skull, "L" 1 racture, simple, skull, "B" 1 racture, simple, skull, "B" 1 racture, simple, skull, "G" 1 racture, simple, skull, "G" 1 racture, simple, skull, "G" 1 racture, simple, skull, "G" 1 racture, simple, skull, "G" 1 racture, simple, skull, "I" 1 racture, simple, vertebra, "L" 2 ratture, simple, vertebra, "L" 2 rtacranial injury, "G" 1 rtacranial injury, "G" 1 rtacranial injury, "G" 1 rtacranial injury, "G" 1 rtaspinal		1	24 5		
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tracranal injury, "J" 1 tracranial injury, "L" 1 traspinal injury, "G" 1 traspinal injury, "G" 1 traspinal injury, "I" 1 traspinal injury, "I" 1 titiple injuries, extreme, "CR" 1 titiple injuries, extreme, "GR" 2 titiple injuries, extreme, "GR" 2 titiple injuries, extreme, "I" 1 titiple injuries, extreme, "I" 1 titiple injuries, extreme, "K" 22 titiple injuries, extreme, "L" 1 pture, lung, traumatic, "GR" 1			1		- 1
traspinal injury, "G" 1 traspinal injury, "G" 1 traspinal injury, "G" 1 traspinal injury, "G" 1 tlitiple injuries, extreme, "CR" 1 tlitiple injuries, extreme, "G" 2 tlitiple injuries, extreme, "GR" 2 tlitiple injuries, extreme, "I" 2 tlitiple injuries, extreme, "I" 1 tlitiple injuries, extreme, "K" 22 tlitiple injuries, extreme, "L" 1 tlitiple injuries, extreme, "L" 1 tlitiple injuries, extreme, "L" 1 tlitiple injuries, extreme, "L" 1 tlitiple injuries, extreme, "L" 1 tlitiple injuries, extreme, "L" 1			1		
1 1 1 1 1 1 1 1 1 1					
Itiple injuries, extreme, "CR" 1 1 1 1 1 1 1 1 1			1		
Ittiple injuries, extreme, "G" 1 1 1 1 1 1 1 1 1			1		
Ittiple injuries, extreme, "GR" 2 Iltiple injuries, extreme, "I" 1 Iltiple injuries, extreme, "K" 22 Iltiple injuries, extreme, "L" 1 Iltiple injuries, extreme, "L" 1 Iltiple injuries, extreme, "L" 1 Iltiple injuries, extreme, "L" 1		·····i	1		• • • • • • • • • • • • • • • • • • • •
litiple injuries, extreme, "1" 1 litiple injuries, extreme, "K" 22 litiple injuries, extreme, "L" 1 litiple injuries, extreme, "L" 1			2		••••••
ultiple injuries, extreme, "L" 22 pture, lung, traumatic, "GR"					i
pture, lung, traumatic, "GR"		1	21		
			1 .		
loke inhalation, "C"	• •		1 -		
angulation, "A"			4 .		:
angulation, "I"			1 .		τ
ound, gunshot, abdomen, "A"		1	î :		
ound, gunshot, abdomen, "A" 2 ound, gunshot, abdomen, "B" 2 ound, gunshot, abdomen, "E" 3			1 .		1

Table 3.—Casualties in the Navy and Marine Corps during the calendar year 1917.—Continued.

		Na	vy.	Mar	ine.
Cause,	Number.	Officers.	Men.	Officers.	Men.
INJURIES—Continued.					
Jound, gunshot, abdominal artery or vein (main)					
	1				9
"K" ound, gunshot, back, "A" ound, gunshot, back, "B" ound, gunshot, brain, "A" ound, gunshot, brain, "B" ound, gunshot, brain, "K" ound, gunshot, brain, "K" ound, gunshot, heart, "A" ound, gunshot, heart, "F"	1		1		
ound, gunshot, back, "B"	1 19	5	10		
ound, gunshot, brain, "A"	19	9	10		
Jound gunshot brain "K"	1	1		1	
Yound gunshot heart, "A"	3	1	1.		
ound, gunshot, heart, "E"	2		1	1	
ound, gunshot, leg, "E"	1				
'Ound, gunshot, heart, "E" 'Ound, gunshot, leg, "F" 'Ound, gunshot, lung, "A' 'Ound, gunshot, lung, "B" 'Ound, gunshot, thigh, "L" 'Ound, gunshot thorax, "A" 'Ound, gunshot, thorax, "B" 'Ound, gunshot, thorax, "E" 'Ound, gunshot, thorax, "E" 'Ound, gunshot, thorax, "L" 'Ound, gunshot, thorax, "L"	1				
ound, gunshot, lung, "B"	1				200
ound, gunshot, thigh, "1"	2				
Jound gunshot thorax "R"	2 2				
ound, gunshot, thorax, "E"	2				
ound, gunshot, thorax, "L"	1				
ound, incised, throat, "A"	1				
ound, lacerated, abdominal, "G"	1		1		
ound, incised, throat, "A" ound, lacerated, abdominal, "G" ound, lacerated, abdominal, "L" ound, lacerated, multiple, extreme, "L"	1		1	2	
Total for injuries	387	23	333	3	-
POISONS.					
otulism, "L"	1				
otulism, "L" pison, anesthesia (nit. ox. oxygen ether) acute, "L".	1				
oison, anestnesia (nit. ox. oxygen etener) acute, "L" oison, acid hydrocyanic, acute, "A" nison, alcohol, chronic, "L" oison, arsenic (salvarsan), acute, "L" oison, cocaine, acute, "A"	1		1		
oison, alcohol, chronic, "L"	1				
olson, arsenic (salvarsan), acute, "L"	1				
oison cocaine acute "A"	î				
pison, fish, acute, "L"	1	1			
oison, heroin, acute, "L"	1		1 2		
oison, illuminating gas, acute, "A"	2		2 3		
oison. illuminating gas, acute, "L"	3 2				
oison, mercuric chloride, acute, "A"	1				
oison onium acuta "I."	î				
oison, phenol, acute, "A"	Î		1		
oison, phenol, acute, "L"	1		1		
oison, strychnine, acute, "A"	1		. 1		
oison, serum (antidiphtheritic), acute, "L"	1 1		1		
oison, cocaine, acute, "A" oison, fish, acute, "L" oison, heroin, acute, "L" oison, illuminating gas, acute, "A" oison, illuminating gas, acute, "L" oison, mercuric chloride, acute, "A" oison, opium, acute, "I" oison, opium, acute, "I" oison, phenol, acute, "L" oison, strychnine, acute, "A" oison, strychnine, acute, "A" oison, unqualified, acute, "A"	1				
Total for poisons	23	1	20		

INVALIDED FROM THE SERVICE.

Table 4.—Discharged from the service by reason of physical disability during the calendar year 1917.

		Nav	у.	Marine.				
Disability.	Number.	Officers.	Men.	Officers.	Men.			
A bscess about rectum Abscess of brain Adhesions about gall bladder Adhesions about stomach Adhesions of peritoneum Albuminuria Amaurosis. Ambiyopia Amputation stump. Amyotonia congenita	35 1 4 18	1	2 1 2 1 29 1 3 17 16 1		1			

Diabe Diabei Dilata Dilatat Dysente Dysente Eczema Endocar Endocar Enteritis, Epididyn

Table 4.—Discharged from the service by reason of physical disability during the calendar year 1917—Continued.

Disability.	Manak		avy.	Ma	rine.
Disability	Number.	Officers.	Men.	Officers.	Men.
nemia, pernicious	1		1		
themia, Simple	. 3		3	100000000000000000000000000000000000000	
nemia, splenic.	. 1			1000000000	
neurism ngina pectoris ngios astic edema nkylosis of joint nkylosis of ossicles	2 2		2		81111111111
ngiospastic edema	1 1		2		
in ylosis of joint	36		33		
nkylosis of ossicles	2	4	2		
			2	2000000000	*******
ppendicitis, acute. ppendicitis, chronic. rterial sclerosis, cerebral.	2		1	- Contains	
ppendicitis, chronic	5		4		
rterial scolrosis, cereoral	1	1			
rterial scelrosis, general	8 2	2	5		
rthritis, chronic.	46		2		
rthritis, acute rthritis, chronic rthritis, deformans	2		44		
Stillina	42		36	Division in a	
stigmatism	39	2	34	Distroinie	
thetosis	1				
trophy of (home or cortile as)	1		1		
thetosis tony of bladder trophy of (bone or cartilage) trophy of muscle	3	3			*******
trophy of ontic nerve.	13		13		
trophy of vesticle. utointo cication, intestinal ronchietasis. ronchitis, chronic	2		3 2		
utointo vication, intestinal.	í		1		TISTATES!
ronchiectasis	î		- mu	1317031515	
ronchitis, chronic	62		57		
			5		
allositás	2		1		
arbuncle aries of tooth	1		1		
	11 10		10		
erebro spinal fever	65	Edmotte ad	62		
erebro spinal fever hancroid of lymph-node holecystitis, acute holestitis, acute	1		1		
holecystitis, acute	i		î		
norentimasis	4		3		
horea chronic progressive	18		18		
horea, chronic progressive horoiditis	1		1		
Catricial contraction	9 9		9 8		
catrix of s*in. rrhosis of liver, atrophic. litis, chronic.	15		14	**********	
rrhosis of liver, atrophic	1		1		
olitis, chronic	î		î		
DIOF DIIIIdness	9		8		
onjunctivitis, chronic onjunctivitis, phlyctenular	6		5		
onetination	1		1		
onstipation onstitutional inferiority	5	2	5		
onstitutional psychopathic state	327 71	2	292 62		minima
ontracture of muscle, fascia, tendon, or sheath.	16		16		
nstitutional psychopathic state. ntracture of muscle, fascia, tendon, or sheath ryature of spine. rstitis, chronic (nonvenereal). acryocystitis.	22		19		
stitis, chronic (nonvenereal)	5		5		
acryocystitis	1		1		
	37	3	32	1	
eformity of penis, acquiredementia, cause unknown	1		1		
ementia, paralytica.	3 7		2		
ementia, praecox	108	1	85		
entition	5	-	5		1008, 80
ermatitis, unqualified	2		2		
etachment of retina	2		1		
etachment of retina. eviation of nasal septum abetes insipidus.	4		4		
abetes mellitus	2		2		
abetes mellitus latation, acute cardiac latation, chronic cardiac sysentery, entamebic sysentery, unclassified	13	2	10		
latation, chronic cardiac	2		2		
ysentery, entamebic	1		1		111111111
ysentery, unclassified	1		1		
zema	3		1		
idocarditis, acute	8 .		8		
nteritis, chronic	49 .		43 .		VOILIE V
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Table 4.—Discharged from the service by reason of physical disability during the calendar year 1917—Continued.

a I		Na	vy.	Mai	ine.
Disability.	Number.	Officers.	Men.	Officers.	Men.
	266	1	227		38
pilensy. pilensy, Jacksonian	6		6		······i
pilensy, Jacksonian xonhthalmic goiter	13		12		,
kromabroma	1		1		
stula in ano	2		1		1
	1		1		
	10	1	8		
	10		1		
	4		4		
istroutosis sitroutosis sitroutosis	î		1		
	1		1		
ngivitis	1		1		
ngivitis ngivoma, chronic			39		
	40	,	35		
infortion of joints	40		2		
	17		13		-
onococcus infection of urethra onococcus infection, unqualified	10		7		-
onococcus infection, unqualified allux valgus			5		
allux valgus	10)	9		-
allux valgus. ammer toe. [ematuria, renal.	1	2	2		
lematuria, renal lemiolegia, old		2	1 2		•
	1	2	1		
I am annhaga into carabrum		1			
		$\frac{1}{7}$ $\frac{1}{2}$	5		
		7 2	2		
		2	. 2		
lernia, enigastric Iernia, femoral Iernia, inquinal	18	3 4	171		-
Iernia, inquinal		1	. 1		
Hernia of brain. Hernia of muscle, fascia, tendon, or sheath		2	. 1		•
			- 2		
Hernia, ventral	. 1	4	. 13		
Hernia, ventral. Iydrocele of spermatic cord	-	2		2	
Hydrocele of tunica vaginalis	-	1		1	
Hydrocele of spermatic cord. Hydrocele of tunica vaginalis. Hydronephrosis. Hydronephrosis.	-	1		1	
Typerestnesta orretma	1	4	. 1:		
Hyperestnesia of reuna Hypermetropia. Hypertrophy of bone Hypertrophy of heart. Hybochlorhydria.		1			
Hypertrophy of heart	.]	6		5	
Hypochlorhydria		1		1	
Hypochlornydria Hypochondriasis	-	9	3	9	
		36		9	
		50	5		
Incontinonce of uring	- '	1			
Incrowing nail. Insufficiency of ocular muscle	1	14		1	
		2		1	
		3		3	
Keratitis.		3		1	
Laryngitis, acute		1		3	
Keratitis Laryngitis, acute Laryngitis, chronic		3	• •		
Lipoma		2		1	
Locomotor ataxia		2		6	
Loose body in joint Loss of substance of bone or cartilage		2		1	
		1		1	
Lymphadenitis, acute		1		11	
Malformations, congenital		11			
Mastoiditis, acute		2		7	
Lymphadenttis, acute Malformations, congenital Mastoiditis, acute Mastoiditis, chronic		3		3	
Masturbation		2		2	
Masturbation Melancholis, involutional Menipe's disease Menipetis, erebro-spinal Moningitis, spinal		8		2 3 2 1 7	
Meningitis corebro-spinel		7		7	
Maningitis spinal		1		1	
		5	1	2	•••
Migraine		2		2	
Migraine. Myelitis, disseminated. Myolarditis, chronic. Myopia. Myositis chronic		29	2	22	
Myocarditis, chronic	**	86		77	
Myonio		3	1 ,	3	1

Table 4.—Discharged from the service by reason of physical disability during the calendar year 1917—Continued.

Disability.	Number	-7550	vy.	Ma	rine.
Dissuitty.	Number	Officers.	Men.	Officers.	Men.
Myringitis, acute	1				
Nausea marina	9		9		1
Nephritis, acute	1		1		
Nephritis, chronic interstitial.	14		14		
Nephritis, chronic parenchymatous. Nephrolithiasis	42 6		36		(
Nephroptosis	1		6		
Nervous dyspepsia	î		1		
Nervous dyspepsia Neuralgia	4		4		1. '
Neurastnenia	68	6	54	1	
Neuritis Neuritis, multiple	22	1	20		· j
Neuritis, multiple	2		2 4		
Neuroretinitis	3		2		
Neurosis, intestinal	5		5		1
Neurosis, occupational	3		3		
Neurosis of bladder	56		46		10
Neurosis, traumatic	5		5		
Nevus No disease	1 84		1		
Nostalgia	1		84	• • • • • • • • • • • • • • • • • • • •	
Nostalgia Nystagmus	2		1		
Juesity	2		2		1
Obstruction, acute intestinal	1		1		
Obstruction, chronic intestinal	1		1		
Opacity of vitreous humor	3	•••••	3		
Orchitis, chronic (nonvenereal).	1 3		$\frac{1}{2}$	• • • • • • • • • • • • • • • • • • • •	
JSSILICATION OF AUTRICIA	1		1	• • • • • • • • • • • • • • • • • • • •	1
Osteitis deformans	î		î		
	3	1	2		
Osteoma. Osteomyelitis, acute. Osteomyelitis, chronic	4		4		
Osteomyelitis abronio	1		1		
Osteomyelitis, chronic Dtitis interna, chronic	9		7		2
Julis media, acute	8		8		• • • • • • • • • • • • • • • • • • • •
Otitis media, chronic	270	3	237		30
Ozena	3		2		1
Pachymeningitis, cerebral	1		1		
Palpitation, cardíac Paralysis, agitans	2 3		2		
Paralysis of nerve	11		3 11		• • • • • • • • • •
Paralysis of ocular muscle	4		3		
aralysis, muscle, ischemic	1		ĭ		
Paramyoclonus multiplex	1		1		
aranoiac state	3		1		1
ericarditis	1		2		. 1
Pricarditis. Periostitis, chronic	11		9	• • • • • • • • • • • • • • • • • • • •	
es cavuses planus	2		2		. 2
es planus	553		468		85
Phimosis Phlebitis	1		1		
lauricy goute Shringus	2		2		
leurisy, acute fibrinous Pleurisy, chronic fibrinous Pleurisy, serofibrinous Pleurisy, suppurative. Pleuritic adhesions Pleuritic adhesions	4 2		4 2		
leurisy, serofibrinous	2		1		
leurisy, suppurative	20		18		2
leuritic adhesions	3		2 .		î
	2		2 .		
oliomyelitis, acute anterior	1		1 .		
roctitis	2 2		2		
rolapse of rectum	6		6		• • • • • • • • • • • • • • • • • • • •
soriāsis sychasthenia	2		2		
sychasthenia	32	. 2	24		ß
SVCHOSIS QUE LO OFPAINE DEATH DISEASE	2		1	1 .	
sychosis (exhaustive ineffective and toxio)	4		4 .		
sychosis (exhaustive, ineffective, and toxic) sychosis, hysterical	5		5 .		
Sychosis intovication	4		5 1 .		
sychosis, manic depressive	15	1	13		3
sychosis, manic depressive sychosis, traumatic	3		3 .		
	1		1 .		********
yelonephritis. 'yorrhea, alveolar.	1		1 .		
	10				

Table 4.—Discharged from the service by reason of physical disability during the calendar year 1917—Continued.

		Nav	у.	Mari	ine.
Disabilty.	Number.	Officers.	Men.	Officers.	Men.
aynaud's disease	. 2		2		
	20		19		1
1. 6	10		10 7		9
heumatic lever, acute heumatic fever, subacute heumatism, chronic articular	9	2	56		11
neumatism, chronic articular	69	4	11		2
heumatism, chronic articular heumatism, muscular hinitis, atrophic hinitis, hypertrophic ickets	13 6		- 5		, 1
ninitis, atrophic	2		1		1
hinitis, hypertrophic	í		î		
ickets	2		9		
ickets rcoma lerosis, lateral	2		2		
	. 1		1		
DOTTHEA	6		6		
nticomia	2		2		
poirtnea ptiremia nus	1		1		
munitie othmoidel	2		. 2		
nusitis, frontal	3		3 3		
nusitis, maxillary	3		11		
nusitis, frontal nusitis, maxillary mnambulism planchnoptosis	. 11		11		
planchnoptosis	1 25		23		
tenosis of nasal duct	25 1		1		
tenosis of nasal duct	2		2		
tomatilis	0		2		
orlicture of esophagus tricture of urethra trongyloides, intestinal tuttering, ynechia yphilis	3		2		
tricture of urethra	3 1		1		
trongyloides, intestinal	4		2		
tuttering	î				
ynecnia	99	2	82		. 1
ypniis	25		22		
at Hy Cardia	8		8		
alipes Penosynovitis Ponsilitis, chronic	. 2		2		
onsilitis chronic	. 1		1		
rachoma	13		13		
			1		
Suberculosis, acute bronchopneumome	-1 *		4		-
			2		
Pubaroulogic acute and pulmonary miliary			338		
Tuberculosis, chronic pulmonary Tuberculosis of joint.	700		7		
Tuberculosis of larynx	-		3		
Puberculosis of players	2	2	. 1		
Tuperculosis un qualified) 1			
Thor of duodenum] 1		. 1		
Puberculosis of larynx. Puberculosis of pleura. Puberculosis, un jualified. Ulcer of duodenum Ulcer of eye and adnexa. Ulcer of skin	. 3		. 3		
Floor of skin	. 1		- 1		
			- 17		- 10 000
Union of fracture faulty	. 24	4 2	267		
Valvular disease, chronic cardiac	250		1.0		-
Union of fracture faulty Valvular disease, chronic cardiac Variococele	. 1		31		
Vari v		2			
Vertigo	-				
Total for disease	4,83	2 62	4, 234	1 6	5 5
			=		
INJURIES.			1		
A vulsion, fingers, "H"		1		l	
A vulsion, leg, "I"		1			
Avulsion, leg, "L"		1		1	
Compression, chest, "L"		2		1	
Contusion, back, "L"		2		1	
Contusion, eye, "L"		1		1	
Contusion, fingers, "H"	••	1		1	
		1		1	
Contusion, head, "L"		2		2	
Contusion, head, "L" Contusion, toes, "I"				1	
Contusion, head, "L" Contusion, toes, "I" Crush, hand, "H" Crush, hand, "H"		1			1
Contusion, head, "L" Contusion, toes, "I" Crush, hand, "H" Crush, hand, "I" Crush, hand, "I"		1		1	
Contusion, head, "I" Contusion, toes, "I" Crush, hand, "H" Crush, hand, "I" Crush, leg, "I" Crush, leg, "I"		1		1	
Contusion, head, "L" Contusion, toes "i" Crush, hand, "H" Crush, hand, "I" Crush, leg, "i" Dislocation, an'ele, "G" Dislocation an'ele, "L"		1		1	
Avulsion, fingers, "I". Avulsion, leg, "I". Avulsion, leg, "L". Compression, chest, "L". Contusion, back, "L". Contusion, eye, "L". Contusion, fingers, "H". Contusion, head, "L". Contusion, tees "I". Crush, hand, "H". Crush, hand, "H". Crush, leg, "I". Dislocation, an'ele, "G". Dislocation, an'ele, "L". Dislocation, cartilare, intra-art. joint, "G". Dislocation, cartilare, intra-art. joint, "J". Dislocation, cartilage, intra-art. joint, "J".		1		1	

Frace Frace Frace Frace Hemo Intrace Intrace Multip Ruptu

Table 4.—Discharged from the service by reason of physical disability during the calendar year 1917—Continued.

Dislocation, claviele, "G"	Disabilty.	Number.		vy.	Mari	ine.
Dislocation, clavicle, "G",	neM another make makific	Number.		Men.	Officers.	Men.
Dislocation, shoulder, "J". 1			honolog	D-2314	sizi	
Dislocation, shoulder, "J". 1	Dislocation, claviele, "G"	1		1		
Dislocation, shoulder, "J". 1	Dislocation, elbow, "G"	1				1
Dislocation, shoulder, "J". 1	Dislocation, ethow, "J."	. 2		2	1012 00100	
Dislocation, shoulder, "J". 1	Dislocation, femur, "L"	1		1		io elevia
Dislocation, shoulder, "J". 1	Dislocation, knee, "G"	2		2		10.0001018
Dislocation, shoulder, "J". 1	Dislocation, knee, "L"	2		2		
Dislocation, shoulder, "J". 1	Dislocation shoulder "G"	4		4	1107 1000	10.010105
Fracture, compound, finere, "(")	Dislocation, shoulder, "J"	2				30 101018
Fracture, compound, finere, "(")	Dislocation, shoulder, "L"	4				
Fracture, compound, finere, "(")	Dislocation, vertebra, "G"	2		2		
Fracture, compound, finere, "(")	Dislocation wrist "H"	1			Mannan.	attivouve.
Fracture, compound, finere, "(")	Dislocation, wrist, "L"	1		1		
Fracture, compound, finere, "(")	Foreign body, traumatic, eye, "E"	1		1		
Fracture, compound, finere, "(")	Foreign body, traumatic, eye, "L"	2		1		
Fracture, compound, finere, "(")	Fracture compound clavicle "I"	1		1		1,00000077
Fracture, compound, finere, "(")	Fracture, compound, femur, "G"	î		1		
Fracture, compound, radius and ulna, "G"	T - 1	1 - 1 1 -		.1		
Fracture, compound, radius and ulna, "G"	Fracture, compound, mavilla, "L"	1				
Fracture, simple, metatarsal, "H"	Fracture compound, multiple, undualited, "G".	1		1	00000000	
Fracture, simple, metatarsal, "H"	Fracture, compound, radius and ulna, "G"	î		î		C 101010 10
Fracture, simple, metatarsal, "H"	Fracture, compound, radius and ulna, "L"	1		1		
Fracture, simple, metatarsal, "H"	Fracture, compound, skull, "G"	2				
Fracture, simple, metatarsal, "H"	Fracture compound tibis and fibula "C"				11,000,000	COMMON AS
Fracture, simple, metatarsal, "H"	Fracture, compound, tibia and fibula, "L"	2	1	1		010101010
Fracture, simple, metatarsal, "H"	Fracture, compound, ulna, "G"	1		1		
Fracture, simple, metatarsal, "H"	Fracture, simple, antle, "G"	2				
Fracture, simple, metatarsal, "H"	Fracture simple clavicle "G"	3		1	170 10000	Liturus Z
Fracture, simple, metatarsal, "H"	Fracture, simple, clavicle, "L"	i				1
Fracture, simple, metatarsal, "H"	Fracture, simple, elbow, "G"	1		1		
Fracture, simple, metatarsal, "H"	Fracture, simple, elbow, "H"	1				beau al
Fracture, simple, metatarsal, "H"	Fracture, simple, elbow, "L"	1		TO A		5101010101
Fracture, simple, metatarsal, "H"	Fracture, simple, metacarpal, "H".	i				£ 101010 47
Fracture, simple, vertebra, "I" 2 2 Fracture, simple, wrist, "F" 1 1 Fracture, simple, wrist, "G" 1 1 Fracture, simple, wrist, "J" 1 1 Fracture, simple, wrist, "L" 1 1 Hemorrhage into eyeball, traumatic, "J" 1 1 Hemorrhage into eyeball, traumatic, "L" 1 1 Intracranial injury, "G" 1 1 Intracranial injury, "L" 6 6 Multiple injuries extreme "F" 1 1	Fracture, simple, metatarsal, "G"	2		1		1
Fracture, simple, vertebra, "I" 2 2 Fracture, simple, wrist, "F" 1 1 Fracture, simple, wrist, "G" 1 1 Fracture, simple, wrist, "J" 1 1 Fracture, simple, wrist, "L" 1 1 Hemorrhage into eyeball, traumatic, "J" 1 1 Hemorrhage into eyeball, traumatic, "L" 1 1 Intracranial injury, "G" 1 1 Intracranial injury, "L" 6 6 Multiple injuries extreme "F" 1 1	Fracture, simple, metatarsal, "H"	1		I was I	*********	
Fracture, simple, vertebra, "I" 2 2 Fracture, simple, wrist, "F" 1 1 Fracture, simple, wrist, "G" 1 1 Fracture, simple, wrist, "J" 1 1 Fracture, simple, wrist, "L" 1 1 Hemorrhage into eyeball, traumatic, "J" 1 1 Hemorrhage into eyeball, traumatic, "L" 1 1 Intracranial injury, "G" 1 1 Intracranial injury, "L" 6 6 Multiple injuries extreme "F" 1 1	Fracture, simple, metatarsal, "1"	1 2		2	C. Thomason	Ciptorom.
Fracture, simple, vertebra, "I" 2 2 Fracture, simple, wrist, "F" 1 1 Fracture, simple, wrist, "G" 1 1 Fracture, simple, wrist, "J" 1 1 Fracture, simple, wrist, "L" 1 1 Hemorrhage into eyeball, traumatic, "J" 1 1 Hemorrhage into eyeball, traumatic, "L" 1 1 Intracranial injury, "G" 1 1 Intracranial injury, "L" 6 6 Multiple injuries extreme "F" 1 1	Fracture, simple, natella, "L"	3		3		110103031
Fracture, simple, vertebra, "I" 2 2 Fracture, simple, wrist, "F" 1 1 Fracture, simple, wrist, "G" 1 1 Fracture, simple, wrist, "J" 1 1 Fracture, simple, wrist, "L" 1 1 Hemorrhage into eyeball, traumatic, "J" 1 1 Hemorrhage into eyeball, traumatic, "L" 1 1 Intracranial injury, "G" 1 1 Intracranial injury, "L" 6 6 Multiple injuries extreme "F" 1 1	Fracture, simple, patella, "J"	1				
Fracture, simple, vertebra, "I" 2 2 Fracture, simple, wrist, "F" 1 1 Fracture, simple, wrist, "G" 1 1 Fracture, simple, wrist, "J" 1 1 Fracture, simple, wrist, "L" 1 1 Hemorrhage into eyeball, traumatic, "J" 1 1 Hemorrhage into eyeball, traumatic, "L" 1 1 Intracranial injury, "G" 1 1 Intracranial injury, "L" 6 6 Multiple injuries extreme "F" 1 1	Fracture, simple, pelvis, "L"	. 1		1		
Fracture, simple, vertebra, "I" 2 2 Fracture, simple, wrist, "F" 1 1 Fracture, simple, wrist, "G" 1 1 Fracture, simple, wrist, "J" 1 1 Fracture, simple, wrist, "L" 1 1 Hemorrhage into eyeball, traumatic, "J" 1 1 Hemorrhage into eyeball, traumatic, "L" 1 1 Intracranial injury, "G" 1 1 Intracranial injury, "L" 6 6 Multiple injuries extreme "F" 1 1	Fracture, simple, radius, "G"	2		oftheup 2	beintenn	Cipicao W.
Fracture, simple, vertebra, "I" 2 2 Fracture, simple, wrist, "F" 1 1 Fracture, simple, wrist, "G" 1 1 Fracture, simple, wrist, "J" 1 1 Fracture, simple, wrist, "L" 1 1 Hemorrhage into eyeball, traumatic, "J" 1 1 Hemorrhage into eyeball, traumatic, "L" 1 1 Intracranial injury, "G" 1 1 Intracranial injury, "L" 6 6 Multiple injuries extreme "F" 1 1	Fracture, simple, radius and ulna, "H"	1. 2		2		
Fracture, simple, vertebra, "I" 2 2 Fracture, simple, wrist, "F" 1 1 Fracture, simple, wrist, "G" 1 1 Fracture, simple, wrist, "J" 1 1 Fracture, simple, wrist, "L" 1 1 Hemorrhage into eyeball, traumatic, "J" 1 1 Hemorrhage into eyeball, traumatic, "L" 1 1 Intracranial injury, "G" 1 1 Intracranial injury, "L" 6 6 Multiple injuries extreme "F" 1 1	Fracture, simple, radius and ulna, "L"	1				
Fracture, simple, vertebra, "I" 2 2 Fracture, simple, wrist, "F" 1 1 Fracture, simple, wrist, "G" 1 1 Fracture, simple, wrist, "J" 1 1 Fracture, simple, wrist, "L" 1 1 Hemorrhage into eyeball, traumatic, "J" 1 1 Hemorrhage into eyeball, traumatic, "L" 1 1 Intracranial injury, "G" 1 1 Intracranial injury, "L" 6 6 Multiple injuries extreme "F" 1 1	Fracture, simple, scapula, "G"	1		Forson		
Fracture, simple, vertebra, "I" 2 2 Fracture, simple, wrist, "F" 1 1 Fracture, simple, wrist, "G" 1 1 Fracture, simple, wrist, "J" 1 1 Fracture, simple, wrist, "L" 1 1 Hemorrhage into eyeball, traumatic, "J" 1 1 Hemorrhage into eyeball, traumatic, "L" 1 1 Intracranial injury, "G" 1 1 Intracranial injury, "L" 6 6 Multiple injuries extreme "F" 1 1	Fracture, simple, scapula, "L"	1		1		
Fracture, simple, vertebra, "I" 2 2 Fracture, simple, wrist, "F" 1 1 Fracture, simple, wrist, "G" 1 1 Fracture, simple, wrist, "J" 1 1 Fracture, simple, wrist, "L" 1 1 Hemorrhage into eyeball, traumatic, "J" 1 1 Hemorrhage into eyeball, traumatic, "L" 1 1 Intracranial injury, "G" 1 1 Intracranial injury, "L" 6 6 Multiple injuries extreme "F" 1 1	Fracture simple skull "L"	1		atio, "L"	nantanan	a dioceta
Fracture, simple, vertebra, "I" 2 2 Fracture, simple, wrist, "F" 1 1 Fracture, simple, wrist, "G" 1 1 Fracture, simple, wrist, "J" 1 1 Fracture, simple, wrist, "L" 1 1 Hemorrhage into eyeball, traumatic, "J" 1 1 Hemorrhage into eyeball, traumatic, "L" 1 1 Intracranial injury, "G" 1 1 Intracranial injury, "L" 6 6 Multiple injuries extreme "F" 1 1	Fracture, simple, tibia and fibula, "G"	1		1	********	
Fracture, simple, vertebra, "I" 2 2 Fracture, simple, wrist, "F" 1 1 Fracture, simple, wrist, "G" 1 1 Fracture, simple, wrist, "J" 1 1 Fracture, simple, wrist, "L" 1 1 Hemorrhage into eyeball, traumatic, "J" 1 1 Hemorrhage into eyeball, traumatic, "L" 1 1 Intracranial injury, "G" 1 1 Intracranial injury, "L" 6 6 Multiple injuries extreme "F" 1 1	Fracture, simple, tibia and fibula, "I"	1			tor contact	ik mash T
Fracture, simple, vertebra, "I" 2 2 Fracture, simple, wrist, "F" 1 1 Fracture, simple, wrist, "G" 1 1 Fracture, simple, wrist, "J" 1 1 Fracture, simple, wrist, "L" 1 1 Hemorrhage into eyeball, traumatic, "J" 1 1 Hemorrhage into eyeball, traumatic, "L" 1 1 Intracranial injury, "G" 1 1 Intracranial injury, "L" 6 6 Multiple injuries extreme "F" 1 1	Fracture, simple, tibla, "L"	1		1000	anda, uspeu	G. toorson!
Fracture, simple, vertebra, "I" 2 2 Fracture, simple, wrist, "F" 1 1 Fracture, simple, wrist, "G" 1 1 Fracture, simple, wrist, "J" 1 1 Fracture, simple, wrist, "L" 1 1 Hemorrhage into eyeball, traumatic, "J" 1 1 Hemorrhage into eyeball, traumatic, "L" 1 1 Intracranial injury, "G" 1 1 Intracranial injury, "L" 6 6 Multiple injuries extreme "F" 1 1	Fracture, simple, unqualified, "J"	1			OTAN MARK	C magazin
Fracture, simple, vertebra, "I" 2 2 Fracture, simple, wrist, "F" 1 1 Fracture, simple, wrist, "G" 1 1 Fracture, simple, wrist, "J" 1 1 Fracture, simple, wrist, "L" 1 1 Hemorrhage into eyeball, traumatic, "J" 1 1 Hemorrhage into eyeball, traumatic, "L" 1 1 Intracranial injury, "G" 1 1 Intracranial injury, "L" 6 6 Multiple injuries extreme "F" 1 1	Fracture, simple, ulna, "L"	1			0.51015111	*******
Fracture, simple, verteora, 1' 2 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Fracture, simple, vertebra, "G"	1		1	********	*********
Fracture, simple, wrist, "G". Fracture, simple, wrist, "J". Fracture, simple, wrist, "L". Hemorrhage into eyeball, traumatic, "J". Hemorrhage into eyeball, traumatic, "L". I 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Fracture, simple, vertebra, "1"	. 2		1		
Fracture, simple, wrist, "L" 1 1 Fracture, simple, wrist, "L" 1 1 Hemorrhage into eyeball, traumatic, "J" 1 1 Hemorrhage into eyeball, traumatic, "L" 1 1 Intracranial injury, "G" 1 1 Intracranial injury, "L" 6 6 Multiple injuries, extreme, "F" 1 1 Rupture of muscle, traumatic, "L" 1 1	Fracture, simple, wrist, "G"	1		i	WEST MAY	10.1
Fracture, simple, wrist, "L" 1 1 1 Hemorrhage into eyeball, traumatic, "L" 1 1 1 Hemorrhage into eyeball, traumatic, "L" 1 1 1 Intracranial injury, "G" 1 1 1 Intracranial injury, "L" 6 6 6 Multiple injuries, extreme, "F" 1 1 1 Rupture of muscle, traumatic, "L" 1 1 1	Fracture, simple, wrist, "J"	î				1
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Fracture, simple, wrist, "L"	1		1		
Intracranial injury, "G"	Hemorrhage into eyeball, traumatic, "J"	1		1		
Intracranial injury, "L"	Intracranial injury, "G"	1		1		
Multiple injuries, extreme, "F" 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Intracranial injury, "L"	6		6		
Rupture of muscle, traumatic, "L"	Multiple injuries, extreme, "F".	1		1		
	Rupture of muscle, traumatic, "L"	1		•••••		1

Table 4.—Discharged from the service by reason of physical disability during the calendar year 1917—Continued.

			Nav	у.	Mar	ine.
Disability.	Number.	Office	ers.	Men.	Officers.	Men.
INJURIES—Continued. prain of joint, ankle, "L." prain of joint, kine, "G." prain of joint, kinee, "J." prain of joint, kinee, "L." prain of joint, unqualified, "J." prain of joint, vertebra, "G." prain of joint, vertebra, "J." prain of joint, vertebra, "L." prain of joint, vert						
	2			1		
prain of joint, hip. "G"	1			1		• • • • • • • • • • • • • • • • • • • •
prain of joint, knee, "J"	1					
prain of joint, knee, "L"	2			2		
prain of joint, unqualified, "J"	1			·····i		
prain of joint, vertebra, "G"	2			1		
prain of joint, vertebra, "J"	8		1	7		
orain of joint, vertebra, "L"	2		-	. 2		
train of muscle, fumbar, 12	2			- 1		
movitis, traumatic, trock joint, "G"	3			. 3		
vnovitis, traumatic, knee joint, "H"	1			1		
vnovitis, traumatic, knee joint, "L"	2			1		
Vound, gunshot, abdomen, "E"	1 2 2 1			1		1
Vound, gunshot, abdomen, "L"	1			i		
Vound, gunshot, arm, "E"	4			1		
Vound, gunshot, arm, "K"	1			1		
Vound, gunshot brain "E"	î			1		
Wound gunshot brain, "K"	1					
Vound, gunshot, fingers, "E"	1			1		
Wound, gunshot, foot, "E"	1					1
Vound, gunshot, hand, "E"	2			2		
Wound, gunshot, hand, "L"	1 4			2		
Wound, gunshot, leg, "E"	1 1					
Wound, gunshot, leg, "K"	i					
Wound gunshot thigh "I."	î			1		
Wound gunshot thorax "L"	1					
Wound, gunshot, toes, "E"	. 1					
Wound, gunshot, unqualified, "E"	. 1			1		
Wound, incised, ankle, "L"	. 1			2		
Wound, incised, eye, "L"	1			ĩ		
Wound incised hand "L"	·l î			1		
Wound incised leg "L"	i			1		
Wound, incised, unqualified, "F"	.] 1			1		
Wound, lacerated, arm, "I"	. 1			1	1	
Wound, lacerated, arm, "L"	. !			1		
Wound, lacerated, eye, "F"	-	2		2		
Wound, lacerated, eye, "L"	- :	í		1		
Wound, lacerated, fingers, "1"	1 '	i	•••••	î		
Wound lecerated hand "I"		1		1		
Wound, lacerated, knee, "H"		1				
Wound, lacerated, leg, "L"	-	1]		
Wound, punctured, eye, "H"	-	1		1		
Wound, punctured, unqualified, "L"	-	1	•••••			
Total for wounds, etc	20	4	2	167	7	-
POISONS.						
Poison, alcohol, chronic, "L"		3		. :	3	
Poison, cocaine, acute, "L"		1				-
Poison, cocaine, chronic, "L"		3			3	
Poison, gasoline, inhaled, acute, "L"		1	• • • • •		1	
Poison, heroin, acute, "L"	• •	7			7	
		í :::::	• • • • • •		1	
Poison, heroin, chronic, "L"					5	
Poison, heroin, chronic, "L". Poison, lead, chronic, "L". Poison, morphine chronic "L"	••	6			0	
Poison, heroin, chronic, "L". Poison, lead, chronic, "L". Poison, morphine, chronic, "L".		6			2	
Poison, alcohol, chronic, "L". Poison, cocaine, acute, "L". Poison, cocaine, chronic, "L". Poison, gasoline, inhaled, acute, "L". Poison, heroin, acute, "L". Poison, heroin, chronic, "L". Poison, lead, chronic, "L". Poison, morphine, chronic, "L".					2	

OPERATIONS.

TABLE 5.—Report of surgical operations for the calendar year 1917.

		•								-	
		Res	sult.			A	nesth	etic e	mpl	oyed	
Operations.	Cured.	Died.	Improved.	Unimproved.	Transferred.	Chloroform.	Ether.	Ether with other.	Gas.	Other general.	Local or none.
Abscess (cause, location, and operation not stated) Abscess, abdominal, drained Abscess about rectum, incised Abscess about urethra, incised Abscess, appendiceal, incised and drained Abscess of axilla, incised Abscess of brain, trephined (died) Abscess of brain, trephined (died) Abscess of finger, amputation Abscess of finger, amputation Abscess of linger, incised Abscess of liver, incised Abscess of liver, incised Abscess of liver, incised Abscess of lung (died; toxemia) Abscess of mammary gland, incised Abscess of thumb, amputation Abscess of thyroid gland, incised Abscess of sof salivary gland, excision Abscess, pelvis, incision (died; pneumonia) Abscess, pelvis, incision (died; pneumonia) Abscess, pleura, resection of rib.	1 39 2 2 1 166	1 1	1 1	1	3 1	1	1 5 7 1 1 1 1		3		169 15 1 8 19 1 1 1 1 1 1 1 1 20 1
Abscess, peritonsillar, incised. Abscess, pleura, resection of rib. Abscess, pleura, resection of rib. Abscess, prostate gland, incised. Abscess, subpectoral, incised. Adenoids, adenectomy. Adenoma: Breast, extirpation Unqualified, excision. Adhesions of peritoneum, broken up or divided. Amputation stump, reamputation. Anemia, splenic, splenectomy. Aneurism:	1 2 9 3 1		i		 i		1 2				32
Femoral artery, amputation of leg Traumatic, ligation of femoral artery Temporal artery, excision Unar artery, excision Unqualified, resection Angine ludovici, incision Ankylosis of joint: Fingers, amputation Fingers, angustation	3		1	i			1 1 1 1 2 3		1		
Elbow, excision of bone Appendicitis, appendectomy (died; 1 acute dilation of stomach, 2 asphyxia, 5 peritonitis, 1 pneumonia, 1 pleurisy suppurative, 1 toxemia. Arthritis, acute, unqualified, arthrotomy. Arthritis, chronic: Elbow, arthrotomy. Metatarsal, resection.	:i						1,053 1 1 1				
Unqualified, incision and curettage Avulsion: Finger, amputation Forearm, amputation of stump Leg, amputation Toes, amputation Burn, multiple, both legs (skin graft). Bursitis, ehronic: Elbow, excision.	1 3	. 1	2		1		5 1 1 1				
Elbow, excision. Foot, resection Knee, incision and curettage. Carbuncle, incised Carcinoma: Liver, exploratory incision Stomach, partial excision. Cataract, removal (needling).	5 1 9						8 1 1				

Table 5.—Report of surgical operations for the calendar year 1917.—Continued.

		Re	sult.			A	nesth	etic (emp	loyed	l.
Operations.	Cured.	Died.	Improved.	Unimproved.	Transferred.	Chloroform.	Ether.	Ether with other.	Gas.	Other general.	Local or none.
Cellulitis: Arm, incised Foot, incised Hand, incised Ler, incised Ler, incised Unqualified, incised Chalazion, excision Cholevettis, cholecystostomy (died; 2 septicemia) Cholelithiasis: Cholecystotomy Cholelithotomy Chondroma: Neek, excision Testicle, exstration Cicatrix of s' in: Hand, olastic repair	3 1 1			1 1 2	1		4 3 1 10 1 17 3 4 1 1	1 1			
Unqualitied excision. Clavus, axasion. Constipation, ilio-colostomy Contracture of joint, finger, amputation. Cornu, toes, excision.	1 2 1	1	1				2 3 1 1				i
A bdomen, laparotomy (died, peritoritis)	1	2	1 2				2 1 2 2 2 1 5				1
Cystoma: Far e, excised Neck, excised Pancreas, exploratory, incision Sacrum, excision Unqualified, excision Darrocystitis, extirpation of sac	5 5 1 1 29 1			. 1	····		2				1 25 1
Elbow, reduction Fingers, ampurtation. Fingers, excision of callus. Finger, tendon sutured Fingers (webbed), plastic repair Toes, amputation Detachment of reting selers trephined.			1 1 1				1 2 1 3 3				1
Deviation of nasal septum, resection Dislocation of: Cartilage, knee, chondrectomy. Clavicle, suture. Elbow, manipulation. Foot, reduction. Shoulder, open reduction. Vertebra, reduction (died. paralysis). Wrist, excision of scaphoid Deverticulitis, eecum, excision. Ectropion, plastic. Endiddwnitis:	. 210		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3	1		13 1 1 1 2				1
Deverticulitis, cecum, excision. Ectropion, plastic Epididymitis: Epididymectomy. Incision Epithelioma: Lip, excised. Unqualified, excision Ethmoiditis, ethmoidectomy	11 14		1 2				1 9 13 2			-	
Ethmoiditis, ethmoidectomy Fibroma: Breast, excision Scrotum, excision Unqualided, excision	. 4		. 3		-			l			

Table 5.—Report of surgical operations for the calendar year 1917.—Continued.

		R	esult	t.		A	nesth	etic e	empl	oyed	
Operations.			oved:	Unimproved.	Transferred.	Chloroform.	ī.	r with other.		Other general.	Local or none.
	Cured	Died.	Improved	Unim	Trans	Chlor	Ether.	Ether	Gas.	Othe	Loca
Fissure of anus, dilation and cautery	1						$\frac{1}{52}$	<u>i</u>	4		·····
Fistula in ano, repair Fistula of urethra, repair	56				1		1				:
Foreign body, larger to the first transfer transfer to the first transfer transfer to the first transfer t	1		. 1		. 1		4	1			1
Foreign body, tranmatic: Eye, enucleation. Fye, incision. Forearm, excision. Hand, excision. Kn 'e, arthrotomy. Le', excision.	1										1
Forearm excision				- 2	2		1				1
Hand, excision	2						1				
Kn 'e, arthrotomy	3						2				1
Ler, excision.			1	1	1					1	
Tiacout.	. 1						1 2				
Clavicle, simple, open reduction	1					-	1				
Claricle, simple, removal of plate	2				:: :::		2				
Antic, simple, open reduction. Clavicle, simple, open reduction. Clavicle, simple, removal of plate. Clavicle, simple, resection. Clavicle, simple, wired.	2			1			3				
Feet (both), multiple, amputated	. 1						î	1			
Femur, compound, suture	2	3		1	:: :::		3				
Femur, simple, plated	. 1						1				
Clavicle, simple, wired Feet (both), multiple, amputated Femur, compound, suture Femur, simple, plated Femur, simple, open reduction Femur, simple, osteotomy Foot compound (phalanges), incision and	. 1	l						1			
Foot, compound (phalanges), incision and	1 1	1					. 1				
drainage. Foot, simple (os calcis), wired. Foot, simple (phalanges), amputation. Forearm, compound, osteoplastic repair.	. 1	1									
Foot, simple (phalanges), amputation				1			2			: :::	
Forearm, compound, osteoplastic repair	- -			1			î				
Forearm, compound, (ulno) plated				1			. 1				
Forearm, simple, open reduction	-	1					۰,				
Forearm, simple, open val of plate	-	1		1							
Forearm, simple, (redius) plated				1			- 1	2			
Forearm, simple, removal of place Forearm, simple, sutured. Forearm, simple, (radius) plated. Forearm, simple, (radius and ulna) plated. Forearm, simple, (plan) Aycision of fragment.				1			~ I		-		
Forearm, simple, (ulna) excision of fragment.								2			
Forearm, simple, (ulna) wired					'		-	1			
Forearm, simple, (radius and ulna) plated. Forearm, simple, (ulna) excision of fragment. Forearm, simple, (ulna) wired. Hand, compound, plastic repair. Hand, compound, (phalanges) amputation. Hand, compound, (phalanges) sequestrotomy. Hand, compound, (phalanges) sequestrotomy. Hand, simple, (phalanges) open reduction. Hand, simple (phalanges) (old) reset. Humerus, simple (steplatic repair. Humerus, simple, osteoplastic repair. Humerus, simple, osteoplastic repair. Humerus, simple, wired. Humerus, simple, wired. Jaw, compound (supermaxilla), radical sinus				2	,		-	1			
Hand, compound, (phalanges) sequestrotomy				i.			-	3			
Hand, compound, (phalanges) sutured							-	1			
Hand, simple (phalanges), (old) reset				1 .				2			
Humerus, ompound, reduction	4		:::	1				1			
Humerus, simple (condyle), fragment e cose	4.										
Humerus, simple, plated				1 -							
Humerus, simple, wired								1			
Humerus, simple, wired. Jaw, compound (supermaxilla), radical sinus Jaw, simple (inf. maxilla), refracture and wirit Low, simple (inf. maxilla), seruestrotomy	ıg							1			
Jaw, simple (inf. maxilla), sequestrotomy					-	i		1		:: ::	
		1 -			1 .			1			
Leg, compound, plated I eg, compound (tibia), open reduction I eg, compound (tibia), wired. Leg, compound (tibia) and fibula), open r								1			
Leg compound (tibia), wired		2 .						2			
Leg, compound (tibia and fibula), open r	e-	1 .		1				2			
duction	on	1		-							
		ا						1	· - · ·		
suture Leg, simple (fibula), plated. Teg, simple (tibia), plated. Leg, simple (tibia and fibula), osteoplast				;-							
Teg, simple (tibia), plated	ic	1		1							
Leg, simple (tibia and libitia), osteopias						-		1 .			
Tepair (tibia and fibula), plated		1						1 .			
Leg, simple (tibia and fibula), reduction, splin	ts.	$\frac{2}{2}$						2 .			
Nose, compound, repair		2									
Patella simple, repair		1									
Leg, simple (trois and notine); feather the specific Nose, compound, repair. Nose, simple, resection. 'atella, simple, repair. 'elvis, simple (2 screws). Skull, compound, decompression (died: heter the specific spec		1						1 .			
Skull, compound, decompression (died: he	ш-		1	l		2 .		3 -			
orrhage))	1		, ,		510				

Table 5.—Report of surgical operations for the calendar year 1917—Continued.

		R	sult			Anesthetic employed.					
Operations.	Cured.	Died.	Improved.	Unimproved.	Transferred.	Chloroform.	Ether.	Ether with other.	Gas.	Other general.	Local or none.
Fracture—Continued. Skull. compound, exploratory			1				1				
Skull, compound, exploratory. Skull, compound, trephined (died: 2 hemorrhage)		2	3	·			5				
Skull, simple, decompression (died: hemor- rhage). Skull, simple, plastic repair.		1					1				
Skull, simple, plastic repair Tibia and ulna, compound, fragments removed.	1				1		1				
Vertebra, simple, laminectomy		2					2				
Vertebra, simple, osteoplastic repair Zygoma, simple, open reduction	$\frac{1}{2}$						2				
Frostbite: Hand, amputation.		1		2			2 2				
Leg, amputation (died: shock)	3						1				1
			1				1				
Hand, amputation			1				1				
Toes, amputation	7						9				
Foot, amputation. Hand, amputation. Toes, amputation. Joitre, thyroidectomy. Hallux valgus, resection. Jammer toe:	13		.2				12				
Amputation	17		1		;-		10 2				
Tendoplastic	3						2				
Hematoma, traumatic, incision	424	1	2				955	5	33		3
mia)				1			355	3			0
Epigastric, herniotomyFemoral, herniotomy	5 2				::::		2				
Inguinal, herniotomy (died: nitrous acid poisoning)	835	1	2		5	2	798	26	2		1
Umbilical, herniotomy Ventral, herniotomy	2						1	1			
Ventral, herniotomy	17		1	1	1	1	18		1		
Excision and repair Orchidectomy	57		1				52	2	1		
Orchidectomy	1						1			• • • •	
Typertrophy of mammary gland, extirpation of gland	. 2		1				3				
Typospadias, transplantation of urethrangrowing nail, excision	141		1				1 5			• • • • •	13
ntracranial injury, decompression			2				2				
ridocyclitis, enucleation	1						1				
ntracranial injury, decompression	13						4				
ymphodonitie	4		1		1		4	• • • • •			
Axilla, excision	1										
Inguinal, excised and incised	6 197		9		1	10	61		1		13
Unqualified, excised and incised	12		1				5				
ymphangitis, foot, incision	. 2		::::				1				
Axilla, excision. Cervical, adenectomy. Inguinal, excised and incised Unqualified, excised and incised ymphangioma, dissection. ymphangitis, foot, incision ymphoma, excision alformation, congenital:											
Orchidectomy	1						1		• • • •		
Replacement of testicle	1						3				
Orchidectomy (Spina bifida) excision Replacement of testicle Unqualified, dissection (astoiditis, curetted, radical and trephined (died,	2						2				
3 septicemia, 1 toxemia, 2 meningitis, 1 abscess											
of brain) demingitis, ligation of internal jugular and incision	124	7	17		6	5	145	4			
of lateral sinus	1	l					1				
fultiple injuries extreme, plastic repair of face	-		1								

Phin Phlet Pleur Pleuri

As
Ree
Pneum
Polypus
Polypus
Proctitis
Prolapse
Prolapse
Prolosis, pl
Pyelonep
Redundan
Redundan
Redundar
Rininitis, c
Rupture o
Rupture o
Muscle
Muscle
Muscle,
Sphinct
Sphinct
Tendon,
Tendon,
Tendon,
Tentori,
Urethra,

Table 5.—Report of surgical operations for the calendar year 1917—Continued.

Operations.		Res	ult.			Anesthetic employed.						
	Cured.	Died.	Improved.	Unimproved.	Transferred.	Chloroform.	Ether.	Ether with other.	Gas.	Other general.	Local or none.	
										i ist		
Vecrosis: Bone, carpal, incised and curetted	·····i						1 2					
Bone, face, incised and curetted.	1						1					
Bone, face, incised and curetted Bone, frontal, excision. Bone, leg, incised and curetted. Bone, tote, excision. Cartilage, costal, curetted.	1		1				2			****		
Bone, metacarpal, curetted	1						1				7.	
Bone, toe, excision	1											
Cartilage, costal, curetted	-										Sha	
Acpinontinasis.	1		1				2 3					
Nephrectomy Nephrolithotomy Distruction, intestinal: Illostomy (died, toxemia) Laparotomy (died, 3 shock) Ligation of omentum Distribution application of eye	2				1		3		1	Cine	10	
Obstruction, intestinal:	2	1					3					
Laparatamy (died, toxellia)		3					3					
Ligation of omentum	1					101.	1		111			
Digation of omentum Ophthalmitis, enucleation of eye	1 6						6				14.	
Orchitis, orchidectomy						0707		ping!	N/A	10.0		
Osteoma.	4						4					
Tibia, excision Unqualified, excision	2						2 4	670	100		1301	
Unqualified, excision	4		1	1			i ol	pelg	900	and gr	dan	
Osteomyelitis:	1						1				-00	
Incision and curettage	. 3		5		1		8 2		. 1			
Femur, removal of sequestrum	1		2				1				ulo	
Finger, amputation	1						1	1				
Osteomyelitis: Fat transplantation. Incision and curettage. Femur, removal of sequestrum. Finger, amputation Toe, amputation Pancreatitis, chronic, cholecystectomy. Papilloma, foot, excision. Paraphimosis, circumcision. Periostitis:	1						1					
Papilloma, foot, excision	- 7											
Paraphimosis, circumcision	- "						nei	1	Bis	N in	A T	
				· · · · · · · · · · · · · · · · · · ·			1		: -:		-	
Fingers, amputation	1 2			1		1	2		1 .1		in a	
Fingers, incision	1		1		1	1		dile				
Rib, curettage	1			1			1					
Femur, incision and curettage Fingers, amputation Fingers, incision Rib, curettage Tibia, sequestrotomy Ulna, incised and curettage					. 2		2				0	
Peritonitis:				100	1	5 50	is mos	appri	: husi	101	70	
General, laparotomy and drainage (died, 2 sep-	2	2	1				5	10				
ticemia). Nephrotomy (died, toxemia) Phimosis, circumcision Phlebitis, phlebectomy.		. 1				i	10					
Phimosis, circumcision	732						1					
Phlebitis, phlebectomy Pleurisy, serofibrinous:		1		1	-	-	1	1.	8 7 27			
Aspiration	- 1							. 1			1	
Aspiration. Thoracotomy	. 1								10 (3)	Z X	1	
Pleurisy, suppurative: Aspiration. Resection of rib. Polypus, ear, removal. Polypus, nasal, removal. Polypus, dilation of subjucter and cautery.	. 2		. 2				. 2					
Resection of rib	. 173					11	54		3 47			
Pneumonia, lobar, laparotomy	· · · · · i	. 1								0 00		
Polypus, ear, removal	23		. 5					2				
Proctitis, dilation of sphincter and cautery	. 1						- 1					
Prolapse of rectum, repair	35					:			i	1	100	
Pterygium, excision and repair				3 4 5 6 3	-							
Pyelonephritis, nephrectomy					. 1			1				
Redundant prepuce, circumcision	262					:						
Redundant scrotum, partial amputation	28											
Polypus, nasal, removal Proctitis, dilation of sphincter and cautery Prolapse of rectum, repair. Pterygium, excision and repair Ptosis, plastic resection. Pyelonephritis, nephrectomy Redundant prepuce, circumcision Redundant scrotum, partial amputation Rhinitis, chronic, turbinectomy Rupture of:	3	-	100		7	3	19/15	1	-	alie	1	
The state of the s					1						100	
Intestines, tratimatic, gastrojejunoscomy Larynx, trachectomy. Muscle (forearm), suture of fascia Muscle, unqualified, plastic repair Sphincter ani, repair Tendon, tenorrhapy Urethra, cystotomy Urethra, repair								1		1		
Muscle (norearm), suture of lastia			. 1					1				
Sphingter ani, repair				- 1				1				
							-	3 6 8				
Tendon, tenorrhapy		1	· i		1	971		2	2.			

OPERATIONS—Continued.

Table 5.—Report of surgical operations for the calendar year 1917—Continued.

		Re	sult.			Α	nesth	etic	emp!	loyed	1.
1.								other.			
Operations.				ed.	d.			h ot		eral	one
			red.	rov	erre	orn		with	•	gen	ı n
	èd.	-i	ror	пр	nsfe	orol	er.	er		er g	alc
	Cured	Died.	Improved.	Unimproved	Transferred	Chloroform	Ether	Ether	Gas.	Other general	Local or none
Sarcoma: Foot, amputation Foot, excision Intestine. Illo-colostomy Leg, amputation Leg, excision. Neck, excision. Septicemia, incised	1						1				
Foot, excision	î		1				2	2			
Intestine, ilio colostomy							1				
Leg, amputation	1	• • • •			• • • •	• • • •	1				
Leg, excision	1		2				1				
INCCK, CXCISION	1										
Sinus:									i		1
Filonidal aveision	3						3				••••
Sacrum, curettage Unqualified, incised Unqualified, resection	2		• • • •				1				
Unqualified, incised	3	• • • • •				····	3		1		
Sinusitis:	0		-			1			! -		
Frontal evacuation of antrum	12		7		1		6				1
	1						1				
Mavillary, drainage	2						1				
Mayıllarv, drainage. Spur on nasal septum, removal.	6 2						2				
ten biamus ton etemp	3										
Stricture of urethra, urethrotomy	ĭ		222200								1
Stricture of urethra, urethrotomy Symblepharon, plastic	1										
yno (us: Hand, incised Knee, partial excision Syphils (Iritis), iridectomy. Palipes, resection			1								
Knee, partial excision	1						• • • • • • • • • • • • • • • • • • • •				1
Syphilis (Iritis), iridectomy	1						····i				
Thrombosis:	1						-	1		100	
Internal jugular, ligation					1		1				
Jugular, resection	1						1				
Foot (vein), ligation	1 672					9	175	7			1.49
Infoniosis: Internal jugular, ligation Jugular, resection. Foot (vein), ligation. Tonsillitis, tonsillectomy and tonsillotomy. Trachoma, curettage.	1,075		-				1	l			,,
Tracionia, curcuage	_			1			_				
Tuberculosis: Arm, amputation . Cervical glands, dissection . Inguinal glands, incision . Leg, amputation . Peritoneum, incision and drainage Tumor:	1						1				
.Cervical glands, dissection			1				1				
Inguinal glands, incision			1 2				2				
Leg, amputation			1				ĩ				:::::
Testicle orchidectomy	2		2				- 4				
						1					1
Arm excision	1						1				
Back, excision	1 2		1				2				
Forehead eveision	1			1			ī				
Leg excision	Î						1				
Neck, extirpation			1								-
Orbit, excision	1						1				
Forehead, excision Forehead, excision Leg, excision Neck, extirpation Orbit, excision Parotid gland, excision Ulcer of e · e and adnexa, enucleation	. 1		1				1				
Ulcer of duodenum:			1					1		1	-
Enterostomy	. 7						7				
Enterostomy Exploratory incision Uleer of leg (tropic), amputation.				. 1			1				
Ulcer of leg (tropic), amputation	. 1						1		-		
	. 3		1			1	1				-
Excision							î				
Plastic repair Skin graft	. 2						1				-
						-					
Exploratory incision (died; peritonitis)	. 1	1		1			4				
Exploratory incision (died; peritonitis) Gastro-enterostomy (died; hemorrhage)	9 2	1					11			:	
							1 4				
Union of fracture faulty:	. 1										-
Amoutation of toe		1	1	1	1	1	1				
Amputation of toe Excision of callus			. 1								
Amputation of toe Excision of callus Fragment removed		:::		1	::::		. 1				
Union of fracture faulty: Amputation of toe. Excision of callus. Fragment removed Open reduction. Open reduction and suture Uvula, elongated, uvulotomy.		::::	. 1			:	. 1				: :::

OPERATIONS—Continued.

Table 5.—Report of surgical operations for the calendar year 1917.—Continued.

-		Re	sùlt.			A	nesth	etic e	mpl	oyed	
Operations.	Cured.	Died.	Improved.	Unimproved.	Transferred.	Chloroform.	Ether.	Ether with other.	Gas.	Other general.	Local or none.
Varicocele, excision and ligation Varix, excision and ligation Vound, gunshot: Abdomen, repair of perforations (died; 2 shock,	390 59		4				337 53				10
1 hemorrhage). Antrum, plastic (died; pneumonia). Fingers, amputation. Foot, bullet removed. Foot, evcision of necrosed bone. Hand, ligation of vessels.	ĩ				 1		2				
Hand, repair of tissue Hip, exploratory incision Knee, repair of tissue Leg, bullet removed Ly incision and questage	2 1 1 9 2						2 1 1 5				
Neek, bullet removed Thigh, reduction of fracture Wound, gunshot: Thigh, repair of femoral vein Unqualified, fragments removed			1				1				
Arm, neurorrhaphy and tenorrhaphy Conjunctiva, sutured Hand, tenorrhapy and suture Lumbar, suture Penis, plastic repair	1 1 2						2				
Wrist, foreign body removed. Wound, lacerated: Ankle, repair of tendon. Arm, repair of nerve. Arm, sutured.	1		1 1				1				
Face, sutured. Fingers, amputation. Foot, amputation Hand, excision of sear.	14	1	5		1 1	1	10 1 1 1				
Hand, repair of tendon. Hand, sutured. Hand, tenorrhaphy Leg, amputation (died, shock). Leg, incision and drainage.	1 2 2 2 2	1	3			1	1 4 1 1				
Scarp, sittured. Toe, amputation. Unqualified, skin graft. Nound, punctured: Abdepen, exploratory incision.	1 1						1				
Chest, suture and immobilization					1						

DENTAL WORK.

Table 6.—Dental operations for the calendar year 1917.

Operation or treatment.	Number of cases.	Operation or treatment.	Number of cases.
Fillings: Amalçam, ordinary Amalçam, built on post. Cement, permanent Cement, synthetic Cement, temporary Gutta-percha, permanent Gutta-percha, temporary Other than listed Abseess: Acute and blind, lanced Acute and blind, root opening Chronic and fistulous, treated Bridge: New Removed Recemented Crown: Gold, new Gold, removed Gold, recemented Porcelain, new Porcelain, recemented Gums treated:	29, 437 487 9, 644 5, 991 2, 291 963 7, 455 620 641 17 1,086 620 641 42 228 400 25 89 396	Impacted teeth: Corrected. Extracted. Inlays: Gold, new. Porcelain, new. Removed (gold or porcelain). Recemented (gold or porcelain). Mavilles treated: Fractured. Necrosed. Prophylaxis: Calculus removed (sets). Cleaned and polished (sets). Pulps: Exposed and extirpated. Exposed and devitalized. Putrescent. Roots: Canals filled. Canals treated. Porcelain crowns (incisor). Porcelain crowns (bicuspid). Extracted. Teeth extracted (other than roots). Treatment (other than listed).	2644 345 1 1 555 184 6 653 7, 772 5, 955 4, 208 3, 77; 4, 581 10, 82; 11, 16(20, 20) 17, 78(3, 41;
Gingi itis	809	Total operations	

RECRUITING.

Table No. 7.—Recruiting statistics, Navy and Marine Corps, for the calendar year 1917.

· · · · · · · · · · · · · · · · · · ·	Na	vy.	M	arine Cor		For	
Character.	Original.	Reenlist- ment.	Original.	Reenlist- ment.	Accepted applicants.	Naval Reserve.	civilian cruise.
Total applicants. Total enlisted Examined by medical officer Rejected by medical officer	384, 521 136, 669 336, 345 162, 699	12, 925 9, 290 10, 742 894	99, 378 22, 245 59, 658 30, 088	1,778 1,628 1,762 94	25, 556 23, 787 24, 646 1, 492	88, 137 60, 564 86, 390 25, 411	4 4 4
Principal cause of rejection by medical officer: Abscess conditions (general)Alcoholic	43 761 9,540 24 4,267 2,814	15 33 75 34	163 1,681 10 839 501	1 2 4 1	1 120 2 17 77	3 153 797 4 384 77	
Eye: Color blind Pefective refraction. Other visual diseases Febrile conditions Flat feet. Gastrointestinal tract, catarrhal	1,865 311 11,072	12 152 16 1 29	1,202 4,845 399 14 3,374	1 8 1 4	12 58 44 2 89	952 5,859 97 6 2,041	
conditions Genito-urinary, nonvenereal Genito-urinary, venereal Glands enlarged Goiter or tendency to Growths(cysts, tumors, etc.) Heart affections Height, over	5,647 57 946 53 7,608 6,712	3 6 100 1 9	15 249 1,101 260 11 2,856 1,069 114	14	5 3 100 1 6 1 159	32 9 1,999	

RECRUITING-Continued.

Table No. 7.—Recruiting statistics, Navy and Marine Corps, for the calendar year 1917—Continued.

	Navy.		l M	far in e C or			
Character.	Original.	Reenlist- ment.	Original.	Reenlist ment.	Accepted applicants.	Naval Reserve.	For civilian eruise.
Principle cause of rejection, etc.—Con. Height and weight, under. Hemorrholds. Hernia or rendency to Intestinal parasites. Mental disorders. Nasal abnormalities. Nervous conditions: Epilepsy. Other. Poor physique. Pyorthoea. Respiratory tract, catarrhal condi-	481 2,027 4,855 4 723 928	13 30 2 4	124 397 1,354 180 245 4 18 846 10	7	19 26 12 8 3 3 17	60 796 1,165 5 38 65 8 16 254 8	
tions. Rheumatic conditions Skin diseases. Speech defective. Tattooing objectionable. Teeth defective. Tonsillar conditions Tuberculosis or suspects Unsightly scars and marks. Varicocele or varicose veins Weight, over. Weight, under All other causes	449 147 2,976 561 66 13,884 1,530 2,261 83 6,569 137 31,531	2 3 16 3 81 1 16 35 1 93 5.	21 6 751 112 2,361 218 544 7 1,336 49 2,731 71	15 15 1 16 10	5 3 17 40 10 75 183 4 353 2	25 8 228 22 5 2,506 93 363 7 1,483 239 4,204	

FINANCIAL.

Table 8.—Statement of total cost of maintenance and of average cost per diem for maintenance and subsistence of naval hospitals for the fiscal year 1918.

Hospital at 1	Total cost of maintenance.	Subsist- ence.	Mainte- nance.	Subsistence per diem.
Annapolis, Md. Canacao, P. I. Charleston, S. C. Chelsea, Mass. Fort Lyon, Colo Great Lakes, Ill. Hampton Roads, Va. League Island, Pa. Mare Island, Cal. Narragansett Bay, R. I. New London, Conn. New York N. Y. Norfolk, Va. Olongapo, P. I. Paris Island, S. C. Pearl Harbor, Hawaii Pensacola, Fla. Philadelphia, Pa. Portsmouth, N. H. Puget Sound, Wash. St. Thomas, Virgin Islands. Washington, D. C. Yokohama, Japan.	92, 612, 61 181, 955, 82 314, 180, 27 317, 719, 65 459, 598, 24 199, 856, 25 146, 621, 17 311, 738, 31 303, 530, 76 46, 725, 32 853, 997, 29 580, 183, 31 27, 191, 73 47, 299, 82 26, 404, 28 100, 587, 82 271, 674, 74 115, 181, 06 107, 395, 60	Days. 72, 393 63, 889 121, 500 121, 500 121, 502 121, 502 121, 502 122, 503 123, 554 132, 551 194, 464 1224, 341 1492, 785 194, 464 167, 727 38, 373 153, 191 79, 441 83, 787 10, 527 107, 590 5, 369	\$1. 861 1. 449 1. 497 1. 8562 1. 8306 1. 3818 2. 19 2. 24 1. 155 1. 123 2. 4006 3. 8067 1. 177 9007 91805 1. 578 2. 62 1. 773 1. 4498 1. 281 2. 3855 1. 717 1. 9816	\$0.730 .5834 .633 .5395 .6555 .5841 .599 .59 .5402 .517 .6262 .5905 .6411 .5661 .43448 .5374 .66 .625 .6733 .5559 .46 .75

¹ Figures from Guam are not available at this time.

Table 9.—Statement of the activities of naval medical supply depots.

7			Number of requisi- tions.	Value of requisitions filled.
New York, N. Y Mare Island, Cal Canacao, P. I Base Seven		 		\$2,460,858.66 116,677.21 17,082.58 21,883.22

TABLE 10.—Statement of the naval hospital fund.

The condition of the fund is as follows: Balance on hand July 1, 1917 Transferred to credit since July 1, 1917	\$227, 643. 26 1, 394, 017. 64
TotalExpended since July 1, 1917	1, 621, 660. 90 1, 453, 975. 35
Balance on hand June 30, 1918	

Bure Bure Bure Bure Bure Butler

Canacao, Carpente Carriers.

INDEX.

	Page.
Air space, requirements	51
Ambulances, gift of	33
Ambinance smibs	73
American Amoulance, Neilliv	
American Red Cross. See Red Cross.	23
Army sick and wounded:	
Baturn of by Navy	
Return of by Navy	66, 69
	82
	75
Asper, J. B. Atlantic Fleet, report of fleet surgeon.	180
Atlantic Fleet, report of fleet surgeon	
21 UATHAI Y VEDELB	59 57
	26
AVIALION detachment, Cambridge, Mass	
Avers. W. B	116
Ayers, W. B. Bachmann, R. A	118
Rehia Brogil	27
Bahia, Brazil	73
Bainbridge, W. S.	23, 65
Base hospitals:	•
Base hospitals: Abroad	81.82
7 00 1	20 00
Daute dressing stations	50, 01
Battleships. 56, 57,	62
Rilovi Miss	52, 63
Block Island D. I	142
Block Island, R. I.	120
Bloedorn, W. A.	40
Dide. Iv	44
Boards of health	25
Dogert, D. S	82
Books, issues of	41
Books, issues of Bombing station, northern	82
Bonime, E.	89
Boone, J. T.	
Braisted, W. C	180
Brazil.	,,180
Ryant France	73
Brest, France 23, 39, 8	
Brinsmade, W. B.	82
Brown, C. J.	139
Duckiev, J	22
Blienos Aires	74
Dunctin, Itavai Medicai	40
Duneum, samtary	7 40
Durins, protection against	2 56
Bureau of Animal Industry	125
Bureau, M. and S.:	, 130
Cooperation by	00
Policy of	66
Policy of	. 5
Duder, O. S.	109
Butler, C. S. Cafeteria system of messing.	83
Udi Uili	82
Janacao, P. I	82
Carpenter, D. N	29
Carriers	163
	, 200

the state of the s	Page.
Carroll, M. J	180
Cavite, P. I. Cerebro-spinal meningitis.	105
Cerebro-spinal meningitis	42
Review of	159 179
Statistical tables	177
Chancroid infections	1. 183
Chlorination of water	70
Civilian communities:	
Relations to	25
Sanitation of	25, 26
Civilian hospital facilities	33, 99
Class A colleges.	7
Clothing: Antiflash	56
On submarines.	
Cold weather 57. 6	61.62
Clovne Field	3, 120
Coleman, M.	12
Commissary steward	75
Commission Training Camp Activities	34
Communicable diseases, control of	41
Compend for Masters	41
Compend for Masters Compend, medical, for auxiliary ships. Contagious diseases.	159
In Atlantic Fleet	
Corfu	82
Cottle G. F.	41
Courtenay G T	180
Crowell, D. C. Cruiser and transport force.	109
Cruiser and transport force	63
Cumming, H. S. Curl, H. C.	81
Dairy:	Battle
Fort Lyon, Colo.	86
Naval Academy.	112
Naval Academy Daniels, J., Mrs	33
Death leading causes of	179
Death rate Deaths, Navy and Marine Corps, table of	44
Deaths, Navy and Marine Corps, table of	240
Dental Corps	256
Dental treatments Dental work in Pacific Fleet.	75
On transports	65
Department of Agriculture 1111, 11 Dessez, P. T	2, 135
Dessez, P. T.	180
Destroyers, ventilation of	62
Detention system.	52 82
De Valin, C. M. Diphtheria	
Diseases:	11, 120
A mong occupational groups	238
Contagious	59, 179
Deaths from	179
Detailed statement of	
Invaliding from service for.	242 159
Of special interest	183
Veneral 45 68 74 77 195 179 176 17	77. 184
Venereal	113
Dispensary, Staff Headquarters, Paris	TOT
Division of Publications Division of Records and Pensions	40,41
Division of Records and Pensions	49
Division of Sanitation.	42
Dressing stations for battle	55 69
Drinking fountains	00,00

Grand Grand Grand Grand Grand Haite Health Heater Hektoo Hidell, Hoen, V

Dwing near	Page.
Drying room, suggested Du Bois, E. F. Dunbar, A. W	62
Du Bois, E. F.	27
Dunbar, A. W. Dunham, E. K. Dunn, H. A.	132
Dunham, E. K.	
Dunn, H. A. Eastleigh, England	119
Eastleigh, England Eaton, W. E.	180
Eaton, W. E Emergency:	82
Emergency:	24, 33
Hospital construction.	34
Dirip yellia	167
	101
In Asiatic Fleet.	
In Atlantic Fleet 54, 55, 56, 6	76
In Pacific Fleet	3, 167
At Training Stations	73, 74
At Training Stations 42, 45, 47, 49, 5	2, 159
	59, 61
	81
Evans Institute	10
Evans Institute Examination, psychiatric Expenses beginted	-
Expenses, hospital Fairhaven, Mass. Farwall W. G.	257
Fairhaven, Mass.	407
Farwell, W. G.	
Feeble-minded detection of among requirits	180
Feeble-minded, detection of, among recruits.	8, 137
Federal Board for Vocational Education.	33, 80
r manciai	7 258
	257
	57
Firerooms, scuttle butts for	
Fisher, J. L.	60, 66
Fiske C N	180
Firerooms, scuttle butts for Fisher, J. L. Fiske, C. N. Fleet surgeon's report:	67
Atlantic Fleet Assistic Fleet	
Additic Figet	54
1101001C 1 1000	76
Pacific Fleet	70
Flexner, S. Floor space requirements. 50,5	110
Floor space requirements.	1 101
Food inspection. 25, 48, 13	1, 101
Fosdick Commission 20, 48, 13	
For C	138
Fox, C.	44
Fund, Naval Hospital.	258
Cas delense	26
cas poisoning	26
rathology of	27
	26, 27
Bibliography of	
Gastro-enteritis.	27
Gatawaad I D	60
Gatewood, J. D. Gendarmerie de 'Haiti	131
Centarmerie de Haiti	107
Cenoa	82
Gibraitar	105
GIII, W. T	180
Gioves, leather	193
U0110fffffea	7 770
Graphic charts.	
Grayson C T	49
Grayson, C. T.	24
dualit, Dadrone Islands	105
ourport, minb	142
113101	107
Haisey, W. H	22
150 170	182
fleating system on ships	7 60
Hemer, D. G	23
nektoen, L	163
Hidell, M. L.	
Hoen, W. S.	12
11. N	180

	rage.
Holcomb, R. C.	24
Holden, J. Hospital construction, emergency.	49
Hospital construction, emergency.	34
The overest	19
Hospital Corps: Increase	99 99
Instruction. 12,	44, 40
Legislation for	12
Numerical strength	12
Promotion in	16
Qualifications for	20
Ratings in	20
Schools	22
Other that	17
Strength of	
Table of increase	13, 19
Temporary commissions	.17
Training of	16, 21
Hospital expenses	257
Hospital ships.	70 73
Hospitals, civilian	83 00
Hospitals, Civilian	00, 00
Hospitals, naval:	ar 00
Annapolis, Md	35, 82
Hospitals, naval: Annapolis, Md. Canacao, P. I.	79,82
Charleston, S. C.	85
Chelsea, Mass. Fort Lyon, Colo.	34. 83
Fowt I von Cole	84
Fort Lyon, Colo	07
Great Lakes, Ill. League Island, Philadelphia, Pa. Mare Island, Cal.	07 04
League Island, Philadelphia, Pa	35, 94
Mare Island, Cal	35, 97
New Orleans La	98
Newport B I	35, 99
Newport, R. I. New York, N. Y. 34,	35, 99
New 101A, N. 1	25 100
Norfolk, Va	5, 100
Paris Island, S. C. S. Pearl Harbor, Hawaii.	100
Pearl Harbor, Hawaii	100
Pensacola, Fla	35, 100
Philadelphia Pa	81
Portsmouth, N. H.	101
Puget Sound, Wash	35 101
Weshington D. C.	35 102
Washington, D. C. Yokohama, Japan	70 102
Yokonama, Japan	9, 100
Hospital, Susana Increase of Hospital Corps, tables showing Indianhead Proving-Ground	105
Increase of Hospital Corps, tables showing	13, 19
Indianhead Proving-Ground.	115
Influenza	171
Injuries:	
Injuries: Among occupational groups. Deaths from Invaliding from service for.	238
A mong occupational groups.	241
Deaths from	
Invaliding from service for	246
	183
Insane.	29, 183
Instruction	36, 55
Invalided from service	242
Iona Island, N. Y	128
Iona Island, N. I	138
Jacksonville, Fla	163
Jordan, E. O.	
Kaufman, J. B.	22
Kennedy, J. M	67
Key West, Fla	138
Killingholme, England	82
King, O. D.	180
Waingshmidt H F	34
Kleinschmidt, H. E.	132
Kolmer, J. A.	
Lagos, G.	74
Lagos, G. Las Animas, Colo. See Fort Lyon under Hospitals.	
Le Conte, R. G	23, 81
	OR THE PERSON NAMED IN

Nav Nav

Nava Nava Nava Nava Ca Ga

Legislation:	
Congressional, on venereal diseases Dental Corps	Page.
Dental Corps. Hospital Corps. Increase, Medical Corps.	. 174
Hospital Corps	10
Increase, Medical Corps Naval Reserve Force	12, 17
Un vocational education	Q
Leith Lepers, institute for Lewis, P. A Lloyd, B. J Lockers for first aid Lorient	175
Lepers, institute for.	82
Lewis, P. A.	11
Lloyd, B. J.	46
Lockers for first aid. 1 Lorient	54, 155
Liling (+ A	0.0
Mackenzie († M	9.4
Maintenance, cost of Malaria in Navy, prevention of	257
Mankin, G. H.	31, 115
Maintenance, cost of Malaria in Navy, prevention of. Mankin, G. H. Mann, W. L. Manual for Medical Department. Marine Barracks: Charlotte Amplie, W. r.	26
Manual for Medical Department	28
Marine Barracks:	41
Charlotte Amalie, V. I	
Paris Island, S. C.	109
Philadelphia, Pa	136
Paris Island, S. C Philadelphia, Pa Quantico, Va.	130
Marine Corns Sixth Doorse t	115
Provisional Brigade Hait:	104
Martin, C.	107
Massachusetts General Hognital	12
Mathers, G.	83
Mathers, G. Matteson, G. A.	163
McCarthy I A	82
McCoy, G. W. Measles	180
Measies	47
Medical Corns	760
Medical observers, in war zones. Medical School, Naval, course of instruction at. Medical supply depots. 9, 27, 28, 36, 46, 122	6
Medical School Naval	23
Medical supply depots. 9, 27, 28, 36, 46, 122 Memorial Institute, Chicago 39, 40 Mental defectives.	, 171
Memorial Institute Chicago	1 258
Mental defectives. Michael, W. H. 28	145
MICHael, W. H. 28	, 137
Milk emulsifier	180
Miller M R	72
Miller, M. B. Mink, O. J. Montevideo.	65
Montevideo. Mortality tables.	161
Mortality tables. Mount Tenjo.	74
Mount Tenjo. Mumps.	240
Mumps. Mundell, J. J	107
Mundell, J. J. Murphy, J. F.	124
Murphy, J. F. Nantucket, Mass.	114
Nantucket, Mass. Naval Academy:	23
Naval Academy:	121
Food for midshipmen. Illumination of buildings.	110
Illumination of buildings. 111, Health of midshipmen.	112
Health of midshipmen. Naval Dispensary, Washington, D. C. 110, 112,	110
Naval Dispensary, Washington, D. C. 110, 112, Naval districts.	113
Naval districts. Duties of personnel in	113
Duties of personnel in. Naval Home, Philadelphia.	116
Naval Home, Philadelphia. Naval hospitals.	45
Naval hospitals	01
Naval Reserve Force: 79,	OT
Dental surgeons. Medical officers	10
Medical officers. Naval stations:	8
Cavite P T	O
Cavite, P. I	05
- Justicial Localida	.05

Naval stations—Continued. Olongapo, P. I	: 120	7	Page.
Olongapo, P. I			107
Samoa	• • • •		109
Virgin Islands of U.S			100
Navy yards:			116
Boston, Mass			134
Charleston, S. C. Mare Island, Cal.			151
New Orleans, La			7 10
New Orleans, La. New York, N. Y. Philadelphia, Pa. Puget Sound, Wash. Washington, D. C. Navy yards, training stations, and receiving ships. Neu Berger, G. M. New Bedford, Mass. New London, Conn. Niter cake.	1	el. on	126
Dhiladalphia Pa		9.	129
Proof Sound Wesh		9	158
Washington D C		1.00	115
Nazzy words training stations and receiving ships			110
Now Borger G M			180
New Bedford Mass	1		120
New London Conn	900	3	4, 121
Niter cake	2.		115
Northwestern University Labortory			145
Notes on preventive medicine. Noyes, E. R. Nurse Corps (female).	-1-		49
Noves E B.			2.7
Nurse Corps (female)			11
Nurses:			3 10
NT 10 10 10 10 10 10 10 10 10 10 10 10 10	14.		11
Reserve			11
Native, instruction of Reserve. Occupational groups, diseases and injuries of O'Connor, J. Officers' messes.			238
O'Connor, J.			74
Officers' messes			75
Operations: Dental			0.00
Dental			256
Surgical			249
Osborne, W. E		10, 2	24, 180
Surgical Osborne, W. E. Owens, W. D. Pacific Fleet, report of fleet surgeon Parasites, intestinal. Paris, Dispensary at. Parsons R. P.		41,	07, 118
Pacific Fleet, report of fleet surgeon			75
Parasites, intestinal			1/1
Paris, Dispensary at			27
Parsons, R. P.			82
Paulliac, France			34
Paulliac, France Pelham Bay Park, N. Y		••••	6
Persons, R. C. Phelps, J. R. Phipps Laboratory.	7		44. 174
Phinna I showstown	376		46
Pines C C	3	22	174
Place F E			12
Pierce, C. C. Place, E. E. Plymouth, England.		obiv	82
Pneumonia. Poisons: Trinitrotoluene.	4	12, 1	24, 163
Poisons: Trinitrotoluene	. oi		178
Deaths from			242
Invaliding from service for			240
Table of		2	42, 248
Preventive medicine notes on			49
Promotions			8, 9
Pryor, J. C. Psychiatric research.			41
Psychiatric research		28, 1	37, 151
Publications			40, 41
Quantico Va			30, 110
Public Health Service		. 24	, 25, 47
Queen D. W			180
Queenstown, Ireland			82
Radio School, Harvard		• • • •	117
Railway Battery, Naval		• • • •	104
Ransdell, R. C.			24
Rate:			43
Admission			44
Death			The second second
Rathbun, W. L.			110

INDEX.

Recreation rooms:		Page.
At hospitals		33
On U. S. S. Mississippi	****	60
Recruiting.	I	79, 257
Red Cross, American Auxiliary, naval		33
Auxiliary, naval		33
Reed, T. W. Rehabilitation and reeducation of wounded		105
Renabilitation and reeducation of wounded		32, 80
Representatives abroad Requisitions for supplies, number of		33
Requisitions for supplies, number of	. 39,4	40,258
Rest room for saffors		78
Richards, T. W. Rockefeller Institute		24,33
Rocketeller Institute		9,119
Rockwell, V. M		12
Rodman, S. S. Rosenau, M. J. Ruddock, J. C.		23
Rosenau, M. J		162
Ruddock, J. C.		154
Samoa		107
Sanitary conditions afloat		53
Sanitation, Division of		42
Sanitation officers:		
Commended		24.44
Duties of		45
Instructions to		45
Scarlet fever	21 1	
Schick test	67 1	47 160
Scuttle butt, sanitary	01, 1	54
Segar, L. H.		27
Selective Service Law.		12
Sollors F F		62
Sellers, F. E. Serum, antipneumococcic.		
Shork hito		166
Shark bite		76
Shea, R. O.	00 70	180
Ship, hospital	19, 70,	, 71, 73
Shower baths. Sick days, greatest number, comparison by years.	. 54,	, 59, 60
Sick days, greatest number, comparison by years		179
Sims, W. S., Vice Admiral Smallpox, aborted		- 8
Smallpox, aborted		76
Smith, R.		82
Snow, W. F.		174
Snyder, J. J.		67
Social service workers.		80
Special investigations Speidel, Frederick G.		26
Speidel, Frederick G.		27
S. S. Adirondack		128
C. W. Morse		128
Freidrich der Grosse		127
Kaiser Wilhelm II		127
Stalnaker, P. R		22
Stations, see Navy Yards		103
Stations beyond the seas		103
Statistical tables 28, 30, 31	1,33,4	48, 183
Statistics, vital		48
Stillman, S		82
Stitt. E. R.	. 24.	41, 46
Strathpeffer, Scotland		82
Stratton, R. L. V		109
Strine, H. F		24, 180
Submarine Base:		
New London, Conn		121
San Pedro, Cal		151
Submarine duty, qualifications for		123
Submarine ventilation.		27
Submarines:		
Clothing on		123
Personnel of		122
Ventilation of		

INDEX.

Page.

18	in.
Summers, B. E	11
Supplement to Navai Medical Dunotan Supplement to Navai Medical Dunotan Supplement to Navai Medical Dunotan Supplement to Navai Medical Dunotan Supplement to Navai Medical Dunotan Supplement to Navai Medical Dunotan Supplement to Navai Medical Dunotan Supplement to Navai Medical Dunotan Supplement to Navai Medical Dunotan Supplement to Navai Medical Dunotan Supplement to Navai Medical Dunotan Supplement to Navai Medical Dunotan Supplement to Navai Medical Dunotan Supplement to Navai Medical Dunotan Supplement to Navai Medical Dunotan Supplement to Navai Medical Dunotan Supplement to Navai Medical Supplement to	99
Supply depot, medical: Expansion of 2, Issues from 38,	
Supply depot, medical:	39
Expansion of	58
Issues from 38, 4	
New buildings 38,4	
New buildings 39,4 New outfits 39,	10
New outfits. 39, Supply table 10	10
Supply table	Jb
	40
Sutton, D. G	28
Swinburne Island, N. Y. 150, 177, 18 Syphilis. 23,	83
Syphilis	82
Syphilis	02
Tornado Yokohama	00
Tornado, Yokohama	.78
Trachoma	
Training stations: Great Lakes, Ill	31
Great Lakes, III. Hampton Roads, Va.	29
Hampton Roads, Va Newport, R. I San Francisco, Cal 30, 1	28
Newport, R. I	10
San Francisco Cal 50, 1	.40
The man trained of the state of	
Transports: 65,	69
Accommodations for sick off. Arrangements for messing on. Capacity of, for sick.	70
Arrangements for messing on	69
Capacity of, for sick	
Capacity of, for sick. 7,64,65,67, Drinking water. 7,64,65,67, Medical officers on. 63,64,66.	70
Medical officers on	10.
	67
Special reports from	68
	113
Special reports from 24, 28, 110, I Trible, G. B. Trimble, M. E.	12
Trimble, M. E	129
Trimble, M. E	89
	88
	88
Tuberculosis and syphilis. Tuberculosis hospital.	84
Tuberculosis nospital	
Tuberculosis:	106
	84
Hospital, expansion of, in Guam Hospital, Fort Lyon	
Dairy herd at 85, 88, 90	87
	, 91
Treatment of patients in	88
Treatment of patients in 88 Remarks on origin of 90, 91,	. 89
Remarks on origin of	178
Statistics of	107
Remarks on origin of	177
Tutulla, Samoa, Navai Station. Typhoid fever	111
U. S. S.:	00
U. S. S.: Birmingham Brooklyn. Celtic	63
Birmingnam	79
Brooklyn	57
Celtic	63
Charleston.	57
	,,,,,
Delaware	57
De Kalb.	63
De Kalb	73
Frederick	63
Transpla	63
TT 1	138
	64
Lenape	. 170
T	5
	57
Melville	9,7

U. S. S—Continued.	Page.
Michigan	100 170
Milwaukee	100, 170
Mississi ppi	73
Montana.	57
North Carolina	60 60
North Dakota	60
Oklahoma	61
Ozark	61
Ozark	61
Pennsylvania.	61
Pittsburgh.	74
President Grant	66, 68
President Lincoln.	65, 68
Pueblo	3, 74, 170
Salem	62
San Diego	75
Solace	68 70
South Carolina	168
South Dakota	,
Southerey	118
Seattle	63
St. Louis	63 73
Texas	
Von Steuben	162
Wisconsin	191 199
Wyoming	62
Vaccines	. 02
Venereal diseases 45 68 74 77 195 150 179 176	177 104
Virgin Islands of United States.	109
Vital statistics.	48
Vladivostok	79 70
Vocational education	99 90
von Wedikind, L. L.	. 52, 60
Warrington, Fla	. 140
War zones, medical observations in.	. 140
White, C. Y	. 23
White, C. Whiteside T. C.	132
Whiteside, L. C. Willard Parker Hegyital	65, 180
Williams P. P. P. Williams P. P. P.	. 147
Williams, R. B.	. 180
Yards, Navy. See Navy.	
Y. M. C. A. secretaries.	. 80
Young, J. G.	. 65